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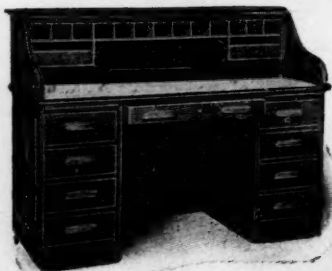
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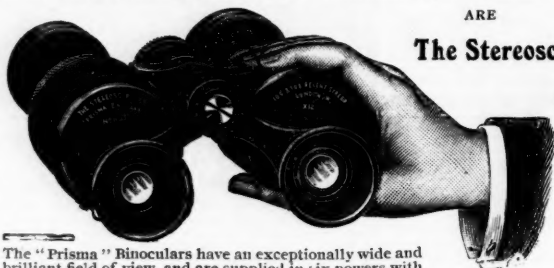
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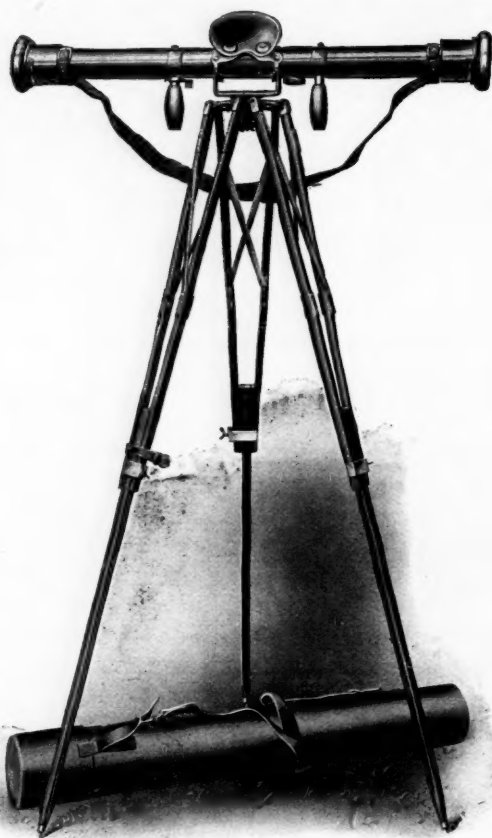
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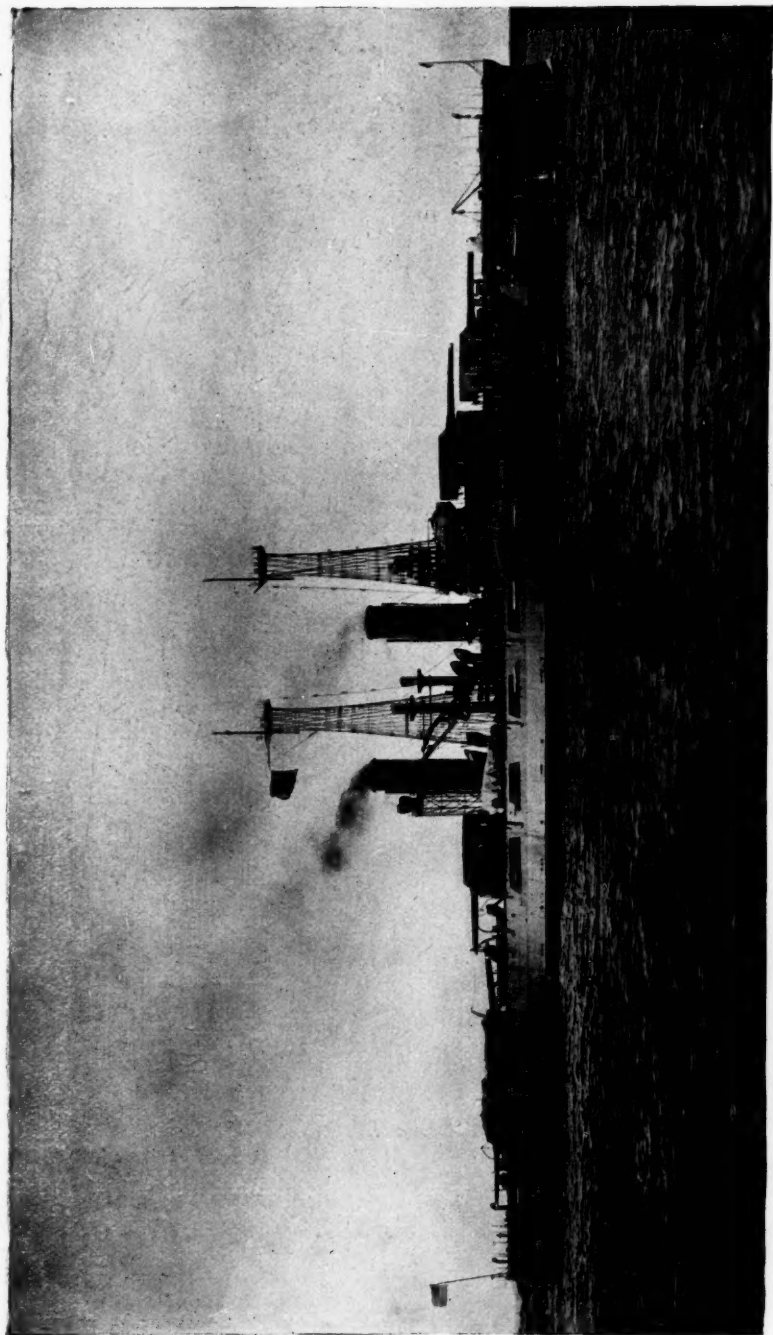
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 ARMAMENT.—Ten 4-calibre 12-inch guns in pairs in five turrets, all on centre line, placed as follows: two on forecasside, the second firing over the first; two aft on main deck on the same level; one amidships on main deck on the same level; one in central battery and four in apointed casemates, two forward and two aft; ten small Q.F. and machine guns, with two submerged torpedo tubes for 21-inch torpedoes.

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The Royal United Service Institution,

WHITEHALL, S.W.

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I Bequeath to THE ROYAL UNITED SERVICE INSTITUTION

the sum of £ _____ (free of duty),
or (in case of a specific legacy) my _____ (free of duty),

to be applicable for the general purposes of such Institution.

And I Declare that the receipt of the Secretary, or other proper officer for the time being of such Institution, shall be a sufficient discharge for the same.



THE JOURNAL
OF THE
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Vol. LIII.

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[Authors alone are responsible for the contents of their respective Papers.]

SECRETARY'S NOTES.

I. OFFICERS JOINED.

Lieutenant V. M. C. Napier, R.H.A.
Captain B. N. Brooke, Grenadier Guards.
Lieutenant G. C. Codrington, R.N.
Captain T. T. Behrens, R.E.
Captain A. H. Hooper, Middlesex Regiment.
Lieutenant L. H. Phillips, Worcestershire Regiment.
Lieutenant R. J. Faulkener, R.N.
Lieutenant H. Harington, West Yorkshire Regiment.
Captain T. J. Reynolds, Royal Irish Regiment.
Colonel F. S. Derham, late East Lancashire Regiment.
Captain D. Wise, Royal Munster Fusiliers.
Major A. W. F. Baird, D.S.O., Gordon Highlanders.
Lieutenant F. J. Bear, 3rd Bn. London Regiment.
Lieutenant D. H. Thorburn, Scottish Rifles.
Lieutenant C. F. Milsom, A.S.C.
Lieutenant D. W. Payne, R.G.A.
Major-General A. D. Anderson.
Sub-Lieutenant O. H. Stoehr, R.N.
Major L. J. Bols, D.S.O., Devonshire Regiment.
Lieutenant E. L. D. Boyle, R.N.
Commander A. C. Dunn, R.N.
Lieut.-Colonel G. L. Chambers, late Madras Volunteers.
Captain C. R. Hay, Middlesex Regiment.
Lieutenant T. R. M. Carlisle, R.F.A.
Captain S. J. P. Scobell, Norfolk Regiment.
Captain St. J. E. Montagu, Northumberland Fusiliers.
Captain B. P. Stafford, East Surrey Regiment.
Second-Lieutenant C. T. Atkinson, Oxford University O.T.C.
Captain A. P. Birchall, Royal Fusiliers.
Captain W. E. Peal, R.F.A. (T.F.)

VOL. LIII.

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II. GOLD MEDAL ESSAY. 1909.

The following Essays have been received:—

"The Framework of an Army."

"Tüchtigkeit vor Blossen Ziffern."

The Council regrets that so few Essays have been sent in. In the month of July it is proposed to invite members to submit suggestions for subjects for the Military Essay, 1911. The naval subject for the 1910 Gold Medal Essay will be announced in the January number of the JOURNAL.

III. ADDITIONS TO THE MUSEUM.

- (6040) Sash worn by General Robert E. Lee, born in 1807, son of General Harry Lee, of Washington's Army. Robert E. Lee, at 56 years of age, took command of the Confederate Army of Northern Virginia, 1st June, 1862, between which date and 9th April, 1865, he directed seven campaigns. He was made Commander-in-Chief of all the Confederate forces on 9th April, 1865, and died in 1870.

Given by General E. H. Clive.

- (6041) Decorations and Medals of the late Surgeon-General Sir James Mouat, V.C., K.C.B., consisting of the
 Victoria Cross,
 Badge and Pendant of the Order of the Bath,
 Queen Victoria's Jubilee Medal,
 Crimean Medal (3 clasps),
 New Zealand Medal,
 French Legion of Honour,
 Turkish Crimean Medal,

Surgeon James Mouat, 6th Dragoons, was awarded the Victoria Cross for having on the 26th of October, 1854, voluntarily proceeded to the assistance of Lieut.-Colonel Morris, C.B., 17th Lancers, who was lying dangerously wounded in an exposed situation after the retreat of the Light Cavalry at the Battle of Balaclava, and for having dressed that officer's wounds in the presence and under the heavy fire of the enemy, so saving his life.

Bequeathed by Lady Mouat.

- (6042) A Nordenfeldt Gun, being the first Machine Gun used on land. The 12th Battalion London Regiment, then known as the Central London Rangers, have the distinction of being the first Corps—either Regular or Auxiliary—in any Army to demonstrate the value of Machine Guns. Two Nordenfeldt Guns, one of which is the one alluded to, became the property of the Corps in the year 1882, but, owing to difficulties with the authorities, their official recognition did not take place for some time, and for seven or eight years afterwards the Battalion remained the only one so equipped.

Given by the Officers, 12th Bn. London Regiment.

OUR FOOD SUPPLIES.

OUR DEPENDENCE ON OVERSEAS FOOD : THE EMERGENCY MEANS
AVAILABLE TO US TO AMPLIFY OUR SUPPLIES ON OUTBREAK
OF WAR, AND THUS PREVENT FOOD PANIC, WITH
ITS DANGER TO THE STATE.

By DOUGLAS OWEN, Esq.

On Wednesday, 10th November, 1909.

Admiral of the Fleet Sir G. H. U. NOEL, K.C.B., K.C.M.G.,
in the Chair.

THE extent to which we have come to be dependent on the ocean vessel for our daily food is so well known that it is needless to re-state the facts. For the purpose of this paper I must, however, very briefly do so. And I will confine my remarks to wheat, by which I mean wheat and flour, because although we are very largely dependent on overseas supplies for nearly everything we eat or drink, bread is a necessity for us in a sense which is more true than in the case of anything else, and so long as we can obtain a sufficiency of wheat, at any rate we cannot starve. And without such a sufficiency, broadly stated, starvation will stare us in the face. Of every five loaves we eat, four are sold to us over the ship's rail. This is the case to-day, but the same processes which have gradually brought us to this pass are always silently and irresistibly working; and just as, in the past, two loaves out of five grew first to three out of five and then to four out of five, so in the future we must expect that the present four loaves out of five will become nine loaves out of ten. And this is by no means the whole of the evil, or of the danger, for when we produced our wheat at home, our reserves on the land, in granary or in stack, were always with us. Now, we live from hand to mouth, under the regularity of steamer imports. We order what we want, to arrive at the date we expect to want it, and steadily the necessity for reserves grows smaller. A corn-trade expert stated to the Royal Commission on Food Supplies that probably in a decade we shall do without stocks altogether in the ports, beyond perhaps the stock for a single week. So that, highly dangerous, in the event of war, as is our position to-day, the growth of population and the increasing tendency to live from hand to mouth are two strong reasons why, in the future, it should

become still worse. And the same processes are already manifesting themselves in Germany and must manifest themselves in any State which becomes less and less agricultural and more and more industrial. For while the density of an agricultural population must be limited to the acreage, the only limits to an industrial population are those imposed by its ability to sell what it produces, and the cheaper the food of the workers the lower the cost at which they can produce and the greater their advantage in the competition for foreign markets. Cheap food, then, being an industrial necessity, if it can be imported, whether duty paid or not, at less cost than it can be grown, it will be imported and not grown. This is the economic law, but without going into economics the broad fact is that the cheaper wheat must oust the dearer, and live-stock, roots and hay or beetroot (on the Continent) will occupy the farmer in its place. And thus it is that our wheat-acreage to-day is less than half what it was thirty years ago, and this in the face of a huge increase in the population. Apparently it would be still less were it not that straw, like hay, which is too bulky to import, has a market of its own. But our population, which was only 17 million a century ago, has grown to 45 million to-day, and seems destined still to be doubled or quadrupled, for there can be no overpopulation of an industrial state which has a sufficient foreign market for its products. And if this be so, then our four imported loaves out of five must grow to nine out of ten or ninety-five out of a hundred. But more than sufficient for us now is the fact that to-day for four-fifths of our daily bread we are dependent on the sea—a fact pregnant with the gravest possibilities in the event of maritime hostilities.

THE REPORT OF THE ROYAL COMMISSION.

It was the gravity of this outlook and the popular anxiety arising out of it that called quite recently for the appointment of a Royal Commission. The instructions to its carefully selected and very able members were to enquire into our various food imports and the country's available supplies at any given period, and to advise as to any measures, over and above a strong fleet, by which we might better secure supplies and avoid violent market fluctuations—in other words, panic prices. Now the labours of the Commission produced very valuable though certainly not very reassuring information; but the result was practically a negative report on the part of His Majesty's Commissioners. The Report, in fact, so far as any recommendation is concerned leaves us where we were. For really the backbone of the whole enquiry was the question of establishing national reserve supplies by means of granaries in some form or another, and as regards all such storage schemes the Commission—that is, the majority of the members—came to the conclusion that the disadvantages of the proposals were greater than any benefit they were likely to produce. All that the Commission was able

to recommend was a scheme of national insurance or indemnity against the risk of capture, a risk justly considered likely to result in insurance premiums which might greatly enhance the price of food and therefore tend to panic prices. They recommended the appointment of a small expert committee to consider such a scheme. A Treasury Committee was appointed accordingly; only, however, with a result which may be summarised thus:—That while the Committee generally approved the principle itself of national indemnity, the expert witnesses were so hopelessly divergent as to the basis of a scheme that the Committee found themselves unable to make any recommendation at all. So that, notwithstanding the ability and desire of the members of the two committees, we are to-day just in the position in which we were before the Royal Commission was appointed. Except, that is, that the evidence of the various expert witnesses and, I think I may say, the general substance and tenour of the Report, demonstrate to the hilt that the grave apprehensions which gave rise to the appointment of the Commission were fully justified.

DOES THE REPORT EXHAUST THE SUBJECT?

The question that I wish to submit for consideration is whether the Report of the Food Supply Commission does actually exhaust the subject; whether there are not, in fact, means of securing or increasing food supplies and of greatly reducing the risk of panic, to which means no reference is found in the Report at all? And, though it may be deemed presumptuous to suggest it, I think that such do exist. Before indicating them, however, I should like to call to memory the facts and their dangers, and I will do so by referring to the Report itself.

FOOD SHORTAGE AND PANIC PRICES.

Now, in the opinion of the Food Commission the available supplies are not likely to fall below $6\frac{1}{2}$ to 7 weeks supply at the most unfavourable season of the year. But what would be a seven weeks' supply in ordinary conditions would certainly not be a seven weeks' supply in the face of a universal fear of shortage and panic prices, while a sudden stoppage of labour and failure of wages would greatly increase the demands on bread. There would consequently be a scramble for flour, the average householder ordering in a sack or two at almost any price, for bread is only a part, and this the cheapest part, of our daily food. Meat, eggs, cheese, sugar, poultry, and canned and preserved provisions of all sorts enter very largely into our dietary, and they are all more costly than wheat. The same cause which would send up the price of bread would greatly enhance the price of the more expensive foods, with the inevitable result of a greatly increased demand for bread, the food the cheapest and most indispensable. So that, as I submit, seven weeks' supply

for ordinary conditions would be nothing like seven weeks' supply in panic conditions. The supplies would simply melt before the demand. A reported capture or two would run up the insurance premiums, and this and the fear of scarcity, and possibly the operations of speculators, would rush up prices to a point altogether beyond the reach of the working classes. The Royal Commission do not deny this. "From the nature of the case," they say, "it is almost impossible to form any reliable estimate as to its probable extent"—that is, the extent of what the Report terms a "psychological rise." Of course, nobody knows, nobody can say. The Report admits, however, that "it may be very serious." The signatories of the Minority Report recognise "the great probability, if not, indeed, the certainty" of such a rise. To leave it out of account, they declare, "would involve a very grave responsibility which we at least could not consent to take upon ourselves." Mr. Broomhall, the widely-known editor of the "Corn Trade Year Book," declared that in his opinion, as the result of the scramble, "there would be nothing left after a day or two for the working classes." This, let us hope, is a pessimistic view; but it is by no means to be ignored. The danger seems indeed to lie rather in high prices—prices beyond the reach of the poor—than in actual shortage. But it is the *fear* of actual shortage, however erroneous, which will make the high prices. Professor Holland, in his evidence, uttered the warning that it is the unexpected that happens, and that a shortage of supplies brought about by even a temporary reverse "would be a calamity so far reaching in its consequences that the risk of it must not be run if provision against its occurrence is reasonably possible." It is, in fact, difficult to estimate and impossible to over-estimate the national distress and consequently the national danger likely to result from a food panic arising at the very moment when we find ourselves plunged into war. And if the price of wheat should advance, as there is the gravest fear that, under the existing conditions, it would advance, to a point beyond the purchasing power of the workers, there would be for them an actual food shortage. Food Commission witnesses expressed the opinion that wheat might go up to 100s. or 200s. a quarter, though they admitted that this was but guesswork. Millions would suddenly find themselves face to face with starvation, and the Government's ability to carry on the war might be most prejudicially affected in consequence. The Report of the Food Commission lays stress upon this point. The Commissioners recognise the possibilities that a food panic might have a very serious effect in hampering Government action in time of war, and say so. I have no desire to paint the possibilities worse than they may be, and I think that those at any rate who have studied the evidence given before the Food Supply Commission, will admit that I have not done so. But what we have got to remember is, that it is the *fear* of a food shortage which will produce panic. People generally may trust in the ability of the Navy to protect

our food supplies, but, while so confiding, they will take no risks. They will, we may depend, rush to make themselves safe, and safe for some weeks to come. And they will buy all the flour they need or can get in order to do so. This rush of millions to get in reserve supplies—together, possibly, with emergency purchases by the naval and military authorities—will create a drain upon the market and send up prices to a point beyond the purchasing power of multitudes, with the result that, so far, at any rate, as the workers are concerned, there will be created a shortage, artificial perhaps, but very real. The effect may conceivably be, indeed, to clear the market actually. And I believe nothing will prevent such a terrible scramble for flour except a well assured and general confidence that special and effective measures will be adopted not only to secure our supplies but to make them abundant. I desire to suggest means by which this, in my opinion, can be done.

THE DESTINATION OF THE EUROPEAN IMPORTS.

Now, first, I wish to invite your attention to the European imports of wheat. Of these we, the United Kingdom, took in 1908, 1907, and 1906, 48 per cent., 45 per cent., and 44 per cent. respectively, average, say, 46 per cent., leaving 52 per cent., 55 per cent., and 56 per cent.—average, say, 54 per cent.—for foreign countries. So that, consequently, rather more than half of the European wheat imports go to our neighbours. An expert witness stated to the Food Commission, five years ago, that, to the surprise of the trade, the Continental imports, then, stood in the relation of seven as compared with five of our own. If I were to proceed on this statement my argument would be much strengthened; but my own independent and reliable source of information, on more recent data, makes the proportion 54 per cent. to the Continent—or, more correctly, to Europe excluding the United Kingdom—and 46 per cent. to the United Kingdom. Of the Continental 54 per cent., 57 per cent. goes to Germany, Belgium and Holland, and, to some small extent, Sweden. During the last three years, the average to these last four States—Germany, Belgium, Holland and Sweden—collectively has been no less than 31 per cent. of the total European imports, United Kingdom included. Let me repeat that of the total European imports on the three years' average: the United Kingdom takes 46 per cent., and our European neighbours 54 per cent. Of this 54 per cent. to the Continent, 57 per cent., or 31 per cent. of the whole European import, has to pass our shores to get to its foreign destination, which destination is almost entirely Germany, Belgium and Holland. The Belgian and Dutch ports are, however, very largely *entrepôts* for the continental hinterland, more particularly German. On the average of 1908-7-6 the German, Belgian and Dutch imports collectively equal 65 per cent. of the imports by the United Kingdom, and I repeat that this vast quantity of corn passes

our coasts to get to its destination. That is to say, for every two sacks of corn that we import, one sack, roughly, passes our shores to go elsewhere. I cannot exactly allocate it to its ports of discharge, but so far as Germany is concerned I understand, on expert authority, that about five-sixths of her very considerable imports reach her by way of Antwerp and the Dutch ports. From which, incidentally, we may infer that in the event of Germany being at war with a maritime Power her overseas food supplies would, with very little disturbance, continue to reach her through the Belgian and Dutch ports in neutral ships. If, for example, she should unfortunately be at war with this country she would no doubt actually rely, perhaps indeed largely rely, on British ships (so far as they might escape her capture) to supply the Dutch and Belgian ports, where she would be able to do her marketing with little inconvenience. I mention this, however, merely by way of parenthesis. Let us return to the fact that 54 per cent. of the European imports go at the present time to the Continent and Mediterranean, and that 31 per cent. pass our shores, nearly all of it on the way to the ports of Germany, Belgium and Holland.

STARVATION AT HOME AND FOOD PASSING OUR SHORES.

So that in the melancholy event of our being suddenly plunged into war, at the very time that a panic may be prevailing with us through fear of a food shortage, large quantities of food will be passing our very doors on the way to Germany, Belgium and Holland, and largely in British ships. In addition, wheat which will not pass our shores will, to a less extent, be bound to France and Spain and to the Mediterranean, also largely in British ships and also in part from ports of our own dominions. And, according to purely modern usage, these vast supplies of food bound to neutral ports will not be subject to our interference unless so far as they may be in enemy ships, and, according to modern usage, not even then if on the outbreak of war they happen to be on the way from a port of our dominions. (Instances of the modern usage referred to are separately printed.)

For in the Crimean War we set a new example. We issued a proclamation that the enemy's ships in our ports, and in ports of our dominions, should (contraband excepted) be free to complete their discharge or loading and proceed in safety to their destination, and that any of the enemy's ships already on the way to such British ports should be similarly exempt from molestation. Whether there were, in fact, any Russian vessels affected by this magnanimous proclamation of ours, or how many there may have been, does not now greatly matter. If, however, our magnanimity did not at the time cost us much, it did set an example which has been followed practically in every war since then, and which, if we again endorse it, may have the most serious consequences for ourselves; for if, when next we are at war, we follow the precedent for which we are responsible, and which others have extended, we shall, though threatened with a

calamitous food panic, allow the enemy's ships then in our British food ports to load up with our wheat, to be by them carried home to their own ports, while, on America's precedent in her late war, the enemy's ships previously so laden, and on the way from our ports, will be similarly exempt from our interference. I will come back to this presently when I have disposed of my first proposition. And my first proposition is this: that immediately on the outbreak of war we should, if found advisable, resort to the Right of Angary or the Right of Pre-emption, and seize and bring in every wheat-laden vessel within reach, making fair payment for the corn, and compensating the shipowners. And if it be replied to this proposition that the Right of Angary will not be available unless we are actually starving, or that the Right of Pre-emption can only be put in force if the food supplies be quasi-contraband goods bound to an enemy's port, then I will abandon Angary and Pre-emption as an argument and substitute for these ancient terms the more modern one of Requisition or Commandeer, or use no term at all. I will take my stand on modern exigencies and not rely on ancient law or precedent. In the ancient days, when commerce was centred in the Mediterranean, a prince in bad need of corn seems to have considered it quite within his rights, if it was in his power, to seize any that he could find afloat, and, probably, he paid for it or not, according to circumstances. Similarly it was for long the admitted right or, at any rate, the common usage for a prince, on going to war, to seize any vessels, under whatever flag, chancing to be in the national harbours, and press them into the service of the State. And we don't need to go back to ancient times, for much more recently we had a striking illustration of a similar right or similar exercise of power. It was in the Franco-Prussian War, when the Prussians seized and appropriated to their own use a very large quantity of Austrian and Swiss railway rolling stock. More than that, they deliberately sank in the lower Seine, to block the channel against French gunboats, eleven neutral merchant vessels, six of them British colliers. Eventually the Prussian Government paid us for them, on our own assessment of the value, though without admitting—indeed repudiating—any liability at all. In the conduct of this war, the Prussians, in fact, "requisitioned"—that was their word—property which the Right of Angary or of Pre-emption, strictly considered, might or might not have entitled them to appropriate. They took it because, being at war, they wanted it, and they relied on the fact as their all-sufficient justification. *Salus populi suprema lex*. And I submit that if on the outbreak of war we should find ourselves threatened with the dire calamity of a food shortage or a food panic, both the fact and the precedents would justify us in bringing in and paying for any ship-borne food within our reach. The justification would, of course, depend on the reality and urgency of the emergency, and the mere fear of a possible shortage would not suffice. In 1794, for example, when we brought in American vessels carrying corn

to France, whom we were hoping to starve into submission, we urged, as a second reason in justification, that we were ourselves short of food and therefore warranted in our action. As a fact, however, it was later shown that we could have secured ample supplies by offering a bounty on corn, which, indeed, we had subsequently done. Possibly the bounty system may again be resorted to with advantage, but in these days of telegraphic and universal knowledge as regards the prices prevailing everywhere, corn will always—sooner or later—be drawn to the best market, bounty or no bounty. Under modern conditions the bounty question is by no means free from difficulty. But my first proposition, if the emergency should justify it, is, that so long as the emergency lasted, and no longer, we should seize any neutral wheat passing our shores, giving notice of our intention and of its justification, and declaring our willingness to pay a fair price for the food and to compensate the carriers. And here let me quote the pregnant words of Bismarck, speaking in 1886 on the Polish question. This, according to the *Times*, is what he said:—

“Neither in peace nor in war could a nation, which is fighting for its existence, follow ordinary rules of conduct. Emergency rights could be asserted by a State when its very existence was imperilled.”

Just so. *Salus populi suprema lex*. And we may, I think, safely say that Bismarck would have endorsed, as a corollary to his far-reaching pronouncement, such words as these:—“And of the imminence and degree of the peril to be met, the State endangered must be its own judge.”

SUPPLIES IN ENEMY SHIPS DIVERTED FROM US BY MODERN USAGES OF OUR OWN CREATION.

If we proceed as I have suggested, we shall not want for food; but having raised the point I am content to leave it and pass on, for in any event we have other recourses available, both of great value and apparently well within our rights. Let us consider them; and first let us take the case of wheat shipped under the enemy's flag at one of our Canadian, Australasian or Indian ports, and the question of days of grace and of immunity. The vessels carrying such wheat will, of course, by the law of nations, be liable to our capture; but if we follow the usage now generally adopted on the outbreak of war, we shall, on the precedent we ourselves established in the Crimean War, issue a proclamation allowing the vessels to complete their loading and proceed in safety, and on the precedent set by America in her war with Spain, granting the like immunity to such vessels already on their voyage from a British to an enemy or any other port. But in our national need for food supplies, to issue such a proclamation would be a quixotic absurdity—doubly absurd in the case of an industrial enemy largely engaged in ocean transport and, like ourselves, in urgent need of food supplies.

SUPPLIES IN BRITISH VESSELS SIMILARLY DIVERTED.

Next comes the question of food supplies in British vessels loading for, or on the way, when war breaks out, to an enemy port. There may be—I think I may say, there are sure to be—many such vessels. Strictly, they cannot deliver their cargoes to the enemy, as this would constitute a trading with the enemy: their voyage should be abandoned. But in modern times the strictness of the old law seems to have been relaxed in consonance with days of grace and immunity proclamations under which the enemy permits or invites such vessels to complete their voyages and guarantees their safety. I submit, then, that here also we should take our stand on the well-known law and refuse to our ships the permission to take advantage of the enemy's immunities. British vessels loading food supplies at or carrying food supplies from a British or neutral port to an enemy destination, should be required to abandon their voyage and land their cargo at a British port.

SUPPLIES IN BRITISH VESSELS BOUND TO NEUTRAL DESTINATIONS.

There remains the case of British vessels loading food supplies for or on the way to a neutral port, and, as British vessels, liable, of course, to capture. These should in like manner be ordered to abandon their voyage and land their cargo at a British port; all the more so as many of such cargoes would be landed at Dutch or Belgian ports, which are largely the stepping-stones for the cities of the hinterlands. Germany, for example, as already observed, obtains a very large proportion of her overseas food supplies through these neutral ports, and in the event of her being at war with a maritime State would doubtless rely on them almost entirely.

By declining to give immunity to the enemy's vessels carrying food supplies from or loading at our ports, by requiring our own vessels carrying food supplies to the enemy to deliver their cargoes at a British port, and similarly by requiring our own vessels carrying food supplies to neutral ports to deliver their cargoes at a British port, we should, on the outbreak of war, effect a large diversion of food supplies to the United Kingdom. For let us remember that British ships are largely the world's food-carriers.

By cabled instructions to coaling ports and ports of call, and by telling off fast vessels, not necessarily warships, to intercept British wheat-carrying vessels in or approaching the Channel, it would be practicable to divert nearly every British vessel from her intended neutral destination, and, more especially as they will be liable to capture, we shall be fully within our national rights in issuing in the national interest such orders to British vessels as may be deemed advisable.

SUPPLIES AVAILABLE AT PORTS OF OUR DOMINIONS.

Finally, there remains our right, immediately on the outbreak of war, to lay an embargo on all food supplies at the ports of our dominions. Neutral or British vessels loading food supplies, at or about to sail with food supplies from such ports, should be required to enter into guarantees to deliver their cargo at a United Kingdom port, or, in the alternative, to unship at the port of loading. And this embargo or restriction should be kept in force during the progress of hostilities or for such shorter period as might be needed. This, indeed, is very much what we did in 1757, when at war with France. We prohibited the export of corn, beef, pork, etc., from our American colonies to any other than a British port, with the requirement of guarantees on the part of exporters, to prevent evasions.

THE PROPOSITIONS SUMMARISED.

Let me summarise my propositions and take first the more delicate case, that of the—

Neutral Vessels.—I propose that in case of urgent need we should be prepared to intercept and bring in any neutral vessels carrying food supplies, paying such compensation as the facts may warrant. I recognise that this would be a strong course to adopt, but national emergencies justify special measures, and at all events the proclamation of our intention to pay compensation would deprive our action of a hostile character and make it merely a question of money payment. I have dealt collectively with the case of neutral vessels carrying wheat to neutral ports, and with the case of neutral vessels carrying wheat to enemy ports, but a distinction can, I think, legitimately be drawn between the two. For, granting that to bring in and pay for cargoes bound in neutral ships to neutral ports might be difficult to justify, the case of neutral vessels carrying wheat to the enemy stands on a different footing. I recognise, however, the delicacy of the subject as a whole, and having called attention to it, I am content to leave it. My only object in mentioning it has been to place on record the fact of its existence. I may say that personally I fail to see how, so long as England has its present geographical position, together with a predominating sea-power, our need can ever be so urgent. But with the conditions as they are, we must be prepared for the emergency of a terrible food panic. To insure against it the following are my propositions:—

I. *Enemy Vessels.*—No British proclamation of days of grace or voyage immunity to be allowed to cover food supplies in enemy ships loading at or on the way from any port of the British Empire, whether to the enemy or to neutrals.

II. *British Vessels to Enemy Ports.*—No enemy proclamation of days of grace or voyage immunity to be allowed to enable British vessels to complete a voyage with food supplies

to the enemy. All British vessels so engaged on the outbreak of war to be required to abandon their voyage and come in to a port of the United Kingdom.

III. *British Vessels to Neutral Ports.*—All British vessels carrying food supplies to neutral ports on the outbreak of war to be similarly required to end their voyage at a United Kingdom port.

IV. Finally, *The Control of Food-shipsments from British Ports.*—That on the outbreak of war no vessel, whether British or neutral, be allowed to carry food supplies from any port in the British dominions to other than a United Kingdom port. I state this separately, but III. and IV. practically come to the same thing, or nearly so.

Now, these emergency rights would be exercised on the outbreak of war and would be continued only until the evidence of our maritime supremacy and the security of our food supplies had been established to the popular conviction. To the possible objection that their exercise might be inconsistent with treaties of commerce, it may be replied that no such consideration should be allowed to come between us and measures necessary for the national safety. As to the practical results of the measures, conclusions can only be drawn generally from the facts. First of all, the great main fact, that of the vast supplies of wheat which come to Europe, 54 per cent. go to consumers other than British, and that no less than 31 per cent. of the total European imports actually pass our shores on the way to such consumers. And I take it that more than half, perhaps much more than half, of this 31 per cent. will be in British vessels, the remainder being in enemy vessels, exposed to our capture, and neutral vessels. And I submit that, even without bringing in for pre-emption the wheat on neutral vessels bound to enemy or neutral ports, the measures which I propose would not only provide us with ample food supplies, but that the proclamation of our intention to resort to such measures immediately on the outbreak of war would of itself create a public confidence which would remove or greatly lessen the fear of food panic, itself a danger to the State.

The artificial and highly-precarious position in which we stand to-day calls for new and special protective measures. The Report of the Royal Commission admits this in effect, but offers no solution. At any rate, its sole recommendation, that of a scheme of national insurance or indemnity, has come to nought. Of the proposals which I have ventured to submit, I believe no mention was made by any of the witnesses before the Commission, myself among them. The proposals have, in fact, so far as I know, never been discussed at all; but inasmuch as they seem to me to be of no small importance, I have been bold enough, by the kind permission of our Council, to place them on record and to submit them to the ordeal of a criticism so weighty and so expert as your own.

T. E. HOLLAND, K.C., D.C.L., LL.D., Professor of International Law and Diplomacy, University of Oxford, etc. :—I have no intention of occupying your time for anything like the allotted ten minutes, but I should like to say a few words as, perhaps, the only member of the Royal Commission who is here present, except the Chairman. I thought the Report of the Royal Commission, although I signed it, too optimistic by a great deal. I therefore signed also a separate Report expressing my own wish that many further expedients should be tried than those mentioned in the Report of the Royal Commission. I thought that accidents might occur. That was admitted, but it was supposed by the majority of the Commission that we should have so strong a fleet that an accident would be almost miraculous. They never defined what they meant by a "strong fleet," and the Committee the other day did not define what they meant by an "adequate fleet." Of course, it is a thing that cannot be precisely defined, but you ought to give some indication of what you mean. Do we mean a two-Power standard? If so, we seem now to have thrown up the two-Power standard. I feel very nervous indeed about the adequacy of the fleet to prevent accidents to our food supplies. And even if you prevent lamentable accidents, there is always that danger which has been so much dwelt upon of scares—scares as to stoppage of supplies, and also scares sending up the rate of insurance. I believe the danger is very considerable indeed, and am therefore extremely obliged to the lecturer for keeping the question before the attention of the public. It is necessary it should be so kept before the public. I rather supposed that what he was going to bring before us again to-day was what he laid stress upon in his evidence before the Royal Commission, if I remember it rightly, namely, the propriety of some national guarantee, whether by way of insurance, or by way of indemnity, when cases actually occurred. I need hardly say how much either of those measures, if they were practicable (and the committee has not convinced me to the contrary), would encourage shipowners to go to sea in greater numbers, and therefore increase our chance of getting larger supplies into the country. However, that is not the point he has brought before us to-day. He has brought before us some suggestions which I confess are of a somewhat startling character, and they rather come home to me because I "profess" International Law, and therefore feel some scruples when well-known principles of International Law are touched. I think that very likely under the stress of a great panic as to the supply of food, we should have to do something very strong. One of the suggestions laid before us to-day—a good many of them are so new that I do not like to pronounce upon them *seriatim* unless I have them all before me in print—one of the suggestions seems to me, if I may say so, quite inadmissible, namely, that we should sally forth into the Channel and take hold of neutral vessels on their way to neutral ports or anywhere else. What would be the feelings of the United States, for instance, to take one country, if, the United States being neutral in a European war in which we were engaged, we sallied forth from our ports with ships of war, brought in their ships and took away their cargoes of wheat? I am afraid that such an affront to a friendly flag, although full compensation were paid for the property taken, would hardly be stood; it would bring about such complications that the latter end would be worse than the beginning. However, I must repeat my hearty thanks to the lecturer for the new points he has laid before us, because I do not think too many suggestions can possibly be made for avoiding the great danger of scarcity which I am sure we shall run should war break out.

Commander W. F. CABORNE, C.B., R.N.R.:—It seems to me that the general trend of the lecture supports the position that some of us have taken up in this Institution, namely, that in time of war we must do the best we possibly can for our own country and not regard too strictly, or in some cases even at all, regulations made in time of peace. When war breaks out, sailors and soldiers will have to come to the front, and, with all due deference to those who express a contrary opinion, I am under the impression that the upholders of the sanctity and inviolability of so-called International Law will have to take a back seat. With regard to Germany receiving supplies through Belgian and Dutch ports in British bottoms, that could easily be prevented by an Order-in-Council forbidding such ships to carry food-stuffs to those places during the continuance of hostilities between ourselves and the first-named country. Cargoes thus diverted would find a ready sale in the United Kingdom, and the liability of shipowners to shippers would, no doubt, be governed by the clause in the bills of lading and charter-parties, relating to the "restraint of Princes, Rulers, or Peoples." In the years gone past, our principal probable naval enemy has been France; but, owing to our present good relations with that country, in the event of war with Germany, provisions and other goods would pass uninterruptedly so long as we held command of the English Channel. For my own part, I do not believe in National Insurance, State Indemnity, nor any similar nostrums; but I pin my faith to our only true insurance policy, which is the maintenance of a powerful and efficient Navy, such as I venture to think we possess at the present moment.

Commander the Right Hon. Lord ELLENBOROUGH, R.N.:—I think that we all owe thanks to the lecturer for bringing before us some new suggestions connected with the important question of our food supply in time of war. Unfortunately the people of this country never appear to be able to think of more than one thing at a time. At present they are so absorbed in the Budget that it is difficult for them to find leisure to consider the still more important question as to how they will be able to get their daily bread in time of war, although those who go to church and chapel pray for it every Sunday. If our food supply is interrupted it is not the poor alone who will suffer, it is the weakest who will starve first. Law and order will disappear. Bank balances, investments, jewels, furniture, and motor cars are not edible, and force and violence will be made use of to obtain food for the strongest. The rich will starve as well as the poor. I do not think there will be any difference between the one and the other. Three years ago I read the evidence and conclusions of the Royal Commission on "Food Supply in Time of War," of which our Chairman was a member. Like many other blue books, the evidence contained in it was more important than its conclusions. I disagree with the report on one point, although I daresay I may be in a minority, for I think that a fortnight's or a month's food in Government stores should always be kept for the purpose of allaying panic, and giving us time to recover from what may merely be a temporary pressure. As for the idea of giving indemnities to owners of captured ships, it would tend to make shipowners indifferent as to whether their ships were captured or not, as was frequently the case during the Russo-Japanese War. Besides, no amount of indemnities can break through a well-conducted blockade. The lecturer suggests as a remedy a considerable interference with the rights of neutrals, and the instant seizure of all enemies' ships in our Dominions, instead of giving days of grace as we did in the

Crimean War. The days of grace granted by us at the outbreak of the Crimean War were at that time mere diplomatic formality, and did not appreciably affect trade. The Baltic had been closed by ice, and the Bosphorus by the Turks for some months before war became inevitable, so that I fancy that scarcely any ships took advantage of them. It did not affect trade in any appreciable degree. History shows that on many occasions ships have been seized first, and that war was declared afterwards. The same will happen again whenever a nation thinks that the risk is great enough to justify such a proceeding. As a rule, I think that neutrals should be interfered with as little as possible. An over-zealous officer in charge of a destroyer may do his country untold mischief by seizing or destroying a neutral ship at an inopportune moment, even if acting in strict accordance with the rules laid down by the London Conference. At the same time, if at war with a neighbour, we should have to insist on a great many more rights than are at present conceded to belligerents by International Conferences. For instance, if the North Sea was the theatre of war, we could never allow the free use of it to neutrals. If we did we should probably lose the command of it. We should be obliged to place all neutral vessels in that sea under regulations similar to those under which our own ships would go from port to port. A revival of some form of *Mare Clausum* would be absolutely necessary. Foreign countries might object, but their remonstrances or threats ought not to affect us much, for we could point out to them that nothing worse than starvation could possibly happen to us in any case, and therefore their threats would pass us by. Of course, we ought always to offer to pay neutrals for any vessels that we take unlawfully; that we should do at once. Neutrals are more likely to feel irritated with us if we break rules that we have agreed to, than if there were none to break. For these and other reasons I hope that the Prize Court rules of the London Conference will never be ratified, as I think that they are more likely to cause additional trouble between belligerents and neutrals than to pour oil on troubled water. At the same time we should concede to neutrals, all points not vital to our safety, so as to avoid raising additional enemies. Maritime wars cannot be localised to the same extent as land wars. Between 1812 and 1814, neutrality became impossible, and all nations found themselves fighting on one side or another. There is another point that has, I believe, not been sufficiently considered, that is the arming of our merchant ships. Most of them are capable of being fitted with a light battery to keep off torpedo boats. I suggest that obsolete guns recently discarded from our Navy might be usefully retained in store for that purpose. In bygone days our large Indiamen frequently beat off the attacks of smaller vessels. On one occasion a fleet of them beat off battleships. As we live in the 20th century, we must also be on our guard against weapons unknown in former days, which are outside the scope of naval warfare. Not very long ago a single individual attempted to corner wheat in America, and very nearly succeeded in doing so. At the present moment, an American Beef Trust has nearly had its own way in the States, and is now about to corner all Argentine exports. Argentina supplies about 42 per cent. of our imported food. An astute enemy, with Government funds, instead of only private wealth at his disposal, may well attempt to do the same, with probably greater chances of success. Our Government should be on its guard against this. This part of our defence must be left to business men of experience, backed by Government funds. Men like the late Lord Goschen and Lord Beaconsfield would probably have been able to beat any enemy at this game. I hope that

the points made by the lecturer will be duly considered by the Naval Intelligence Department, the War College, and the Foreign Office, and ultimately by the Committee for Imperial Defence.

Mr. HARRY QUELCH, Editor of *Justice*.—I presumed that in a lecture before the United Service Institution the question of our food supply in time of war would be dealt with chiefly from the point of view of the Services, from the military point of view and the naval point of view. While I congratulate the lecturer on the address he has given from that standpoint, it does seem to me too much is taken for granted in assuming that we are to accept the present economic position, in the sense that we are always to be dependent, not to a lessening but to an increasing degree, upon foreign sources for our food supply. Surely that is an assumption which the facts of the case do not warrant. As I have said, one can quite understand that the matter should be regarded here more from the naval and military than from the political point of view. But in any discussion of the question, it does seem to me that the object should be to suggest something more than mere protection; that is to say, something more than the mere protection of our foreign food supplies, and to devise means for producing a food supply of our own. As the lecturer has pointed out, the facts of the case in this country are gradually manifesting themselves in all countries, that is to say, with the growth of industry, the growth of food in all countries becomes less and less proportionate, and all countries become more and more dependent upon foreign sources for their supply of food. That being so it is quite clear that the markets for industrial products must gradually diminish, and therefore the attention of politicians and statesmen should be directed in this country rather to developing a food supply of our own than to the mere question of protecting our foreign food supply in time of war. This latter I recognise to be a very important question, but, after all, the other seems to me to be still more important. Lord Ellenborough has said that in case of a war, in spite of all the precautions that might otherwise be taken, the rich would starve as well as the poor. That appears to me to be rather an argument for a state of war, a condition which would induce one to contemplate war with a certain degree of equanimity, because at the present time it is only the poor who starve. Then we should tend to arrive at something like equality, if the rich had to starve as well as the poor, although I imagine that is an apprehension which will not be universally shared. I fancy that, even in a state of war, the rich would be fairly well able to take care of themselves, as they are now; that is to say, unless the anger of the populace in consequence of the mismanagement of the affairs of the State, and of the starvation in which they found themselves, came to be such that the rich had to suffer at their hands. Apart from that, I think the precautions which the rich would be able to take in the way of accumulating stores on the first outbreak of hostilities would be such as to enable them to stave off starvation, and that would be by no means the case with regard to their poorer fellow subjects. With regard to the suggestion made by the lecturer as to the naval and military steps to be taken to protect our foreign supplies of food in time of war, I can see no possible objection to it, even from the point of view of International Law. Because, after all, what is International Law? International Law is only law in so far as it can be enforced. There is a Latin proverb which may be translated: "Amid the clash of arms the laws are silent," and when war is going on practically Martial Law prevails, so far as all parties are concerned.

who are engaged in the war, and neutral countries could only maintain their rights or protect themselves in so far as they were able to do so by force. So that from the point of view of International Law there seems to be little to be said, except in theory, against the propositions advanced by the lecturer. Dealing with the subject from the other point of view, some little time ago a Conference was held in London, called by the Social Democratic Party, to which I belong, of representatives of Labour and Socialist Organisations all over the country, where this question of food supply was considered. At that Conference certain propositions were adopted, and it seems to me that while, as I said at the outset, the question of the military and naval protection of our food supplies in time of war is the one that immediately concerns such a meeting as this, still the other political economic question is one which is of some interest; and at that Conference the following suggestions were put forward:—

1. The establishment of national granaries for the storage of a seven years' reserve wheat supply, such reserve to be accumulated within a period of fourteen days.
2. A complete survey and valuation of all agricultural land and its transfer from private to public ownership, life annuities to owners being given as compensation for compulsory purchase.
3. For the adequate cultivation of the land thus brought under public ownership, the County Councils to be constituted agricultural authorities, having power to cultivate the land direct or impose upon tenants the most approved methods of cultivation. The encouragement of co-operation for the provision of seeds and machinery, a free motor service, municipal markets, the control and ownership of flour milling, and the retail bread supply, the price of wheat to be standardised. I may say in that connection, and in conclusion, that unquestionably the national production of our food supply by the people of this country for themselves is of vastly greater importance in the future than the mere question of the protection of our foreign food supply; and at the present time, while the question of Tariff Reform, of Protection, and similar questions are under discussion, it must be remembered that it is beyond all question that the present railway system, the difficulty of getting produce to market, and so on, operates to a very large extent to discourage the production of the home supply of food.

Major STEWART L. MURRAY, late Gordon Highlanders:—I think we all owe a very great debt of gratitude to the lecturer for the very able and interesting suggestions he has put before us to-day. They are so very new and far-reaching that I do not suppose any of us here would feel very much inclined to attempt to criticise them to-day. They all want a great deal of thinking out before one could offer an opinion on them. But I feel they are very valuable indeed, and all those who have studied the question feel extremely grateful to Mr. Owen for the suggestions he has made. I do not propose for one moment to attempt to criticise them: I would rather like to say one or two words in order to back him up. As regards the Report of the Royal Commission, to which he referred, I do not think we need bother very much about that. It was, of course, a negative Report, but things have moved on since then. I have noticed myself in the last few years a considerable alteration of opinion as regards our food supply in time of war. I can remember—and I am sure there are many others in this room who can remember—that if you discussed the question with anybody, you had to demonstrate first of all that there was a danger, and that a remedy was required. That is, I think, no longer necessary now. Everyone with whom one discusses the matter is

of the same opinion as oneself as regards the danger, and everybody practically is of opinion now that a remedy is required. When things get to that stage, it will not be very long before the demand will be made that something shall be done. It is said that it takes about thirty years to get anything done in this country. There are people in this room who have been at this question for twenty odd years; there are some of us who have been at it for a less period—four, five, eight, nine, and ten years—but that period of thirty years is drawing to a close, and I think that in a few years now we may be certain that we shall get something done. All that is necessary is for people like the lecturer to keep pegging away and doing all they can, and before very long we shall find this country will be put into a satisfactory and safe position. I said that as regards the Report of the Royal Commission we need not bother very much about it, because it is what I would call a peace Report and not a war Report. When I say a peace Report I mean a Report which shirks conquerable difficulties, difficulties being unduly impressive in times of peace, and in face of those difficulties their natural instinct is to let the matter slide. But when war comes they treat those difficulties in quite a different way; that is to say, they face them and say they shall be overcome—they can be overcome and shall be overcome. When war comes there is not the slightest doubt that that is how this question will be faced. All the difficulties which the Royal Commission Report considered, and which the National Indemnity Report considered to be sufficient to induce us to leave the matter alone, will be swept aside as if they did not exist. Of that I am perfectly certain. I am also confident that you have only to wait a little longer to see the matter put straight, because it is absolutely necessary if we are to fight a successful war under modern industrial conditions. Consider for a moment what has been happening in other countries during the last few years. Take the Commune in France, take the bread riots in Italy, take the attempted Revolution in Russia, take the recent riots in Spain, take all the outrages in the American ports during the Spanish war, for commerce protection and that kind of thing; take any country you like, and you will see that modern democracy is much too dangerous a force to be let alone. You cannot ignore it too far, and if you do, the most disastrous consequences will follow. I say that in the modern industrial state it is absolutely necessary that we should have some internal organisation for war if we want to keep things quiet at home. We recently had here a debate on the gold reserve of our country, and this works in in connection with this question of commerce protection and food supply. All those things need to be considered together in the light of internal organisation of an industrial state for war. I would like to impress upon you for a moment the importance of that question of internal organisation for war, because I am certain it is our only hope of getting through a great European war without the most tremendous riots in this country. We do not want to see them; we do not want to have hundreds of thousands of people clamouring for peace at any price when we shall want the whole of our national strength and national patriotism to carry us through. I would like to put one concrete case to the lecturer, which, perhaps, he will reply to as to how it will affect us at the beginning of a war? Take any district you like; take Poplar—perhaps Mr. Quelch will tell us something about that. I say the way war will act will be this: that the poorer classes in all the great districts of London, who are dependent on wages of 21s. a week and under, if food rises to famine height (as it will during maritime war), may be able to buy it for the first week by the help of the

pawnshop; they would be able to buy it the second week by pawning the remainder of their little goods and chattels; but at the end of the third week they would have nothing left to pawn. Before the end of the third week many will have to go on the rates. At the end of the fourth week they will come on the rates in ever-increasing numbers. I believe that we should have, at the end of the fourth or sixth week, 30 per cent. of our town population on our rates—all those included in Sir Charles Booth's 30 per cent.: the poor and the very poor—and the Poor Law is at present accustomed to dealing with only 2½ per cent. of the population. In case of war it might be able to deal with 7 per cent.—that I had from the Secretary and Chairman of the Associated Guardians of England and Wales; but a change from dealing with 2½ per cent. to dealing with 30 per cent. is such an enormous change that it could not possibly be carried through without great organisation and preparation beforehand. The outline of such a scheme I worked out in conjunction with the Secretary of the Associated Guardians, and put it before both their Executive and Parliamentary Committee, who approved, and sent their Chairman to say that something of the kind was absolutely necessary before the Royal Commission. I gave this scheme as evidence before the Royal Commission, but won't say more about it now, except that I think some such scheme must be considered as supplementary to the proposals of the lecturer. That Poplar case is a concrete case which will concern us directly war breaks out, and food goes up to famine prices. At the end of three weeks we shall have nearly 30 per cent. of our town populations coming on to the Poor Rates for relief, and what are we going to do with them? I will not say anything more; I will leave it at that. That is the concrete case we have to consider of what will absolutely happen to us, and which we shall have to deal with.

Admiral F. A. Cross:—I need hardly excuse myself for addressing you, because I was the first man that ever hoisted the danger signal on the question of our food supplies in time of war; and with the assistance of *The Morning Post*, under the heading, "War, Famine, and Surrender," I preached and brought forward the doctrine I advocated until I got it into stronger hands, namely, those of Yerburgh, the ex-Member for Chester, and the Duke of Sutherland. Then it was placed in the hands of a Royal Commission, which, as usual, did nothing. At those times I used to impress upon my audience this question: What is the use of a powerful Navy going to sea and winning battles of Trafalgar when they leave a starving population behind? The Navy under those circumstances is almost useless unless we have sufficient cruisers. Have we sufficient cruisers at the present time? Lord Charles Beresford says we want eighteen more. In 1888 there was a scare of this description—Admiral Hornby was invited by the merchants of London to go into the City, and tell them what was the danger; and what he recommended as a cure. He thoroughly threshed out the subject; he took up every trade route, and the conclusion he came to was that we required 185 cruisers. Yet at the present moment we have not got too, and how can we expect under those circumstances to protect our food supply? Nearly all the cruisers we have would be wanted on the outbreak of war to attend on our battle fleet, as they were in the days of Nelson, who was always complaining that he had not enough frigates; and yet in his day, at the time of the battle of Trafalgar, we had 600 cruisers. Even with that number some of our merchant ships were captured. The lecturer has brought forward a new phase of the question, and Professor Holland has said that if we adopted

it we should be breaking the laws. But "necessity hath no law." That is an old saw, and I think it will turn out to be true. Do you suppose that if I was in command of a cruiser in the Channel, and I knew that my fellow subjects were starving, and I came across a ship laden with corn, do you think I would care about International Law? No! I would turn her in, on the principle that everything is fair in love and war. Then it is said that if we did so we should be at war with all nations. What does that matter? Better to fight than die of starvation. Were not we at war with all nations before, and did not we come out successfully? Again, let me impress upon you that this question of food supply is really a military question. We in the Navy can pick up our food anywhere, and we have magazines of food for the supply of the Navy, but the Army sits still and does nothing. You do not hear of a military officer coming here to lecture and saying that the Army will be of no use without a commissariat. Not long ago I had a serious conversation with certain notables, whose names I will not mention, and said: "If I had my way, badly as we want *Dreadnoughts*, I would spend these millions on the Army, because it is the weakest part of our armour." Also, I said: "We want eighteen more cruisers, as recommended by Lord Charles Beresford." There was a military officer present and he said: "Admiral, are not you contradicting yourself? Just now you said you would spend the money on the Army, and now you say you would spend it on cruisers." In reply, I say, you military men do not think; you do not look ahead far enough for rocks. Is your Army any good without a commissariat? Is a commissariat any good in this country without food ships, which come here at the rate of 300 or 400 a week? Could these food ships come to us without cruisers to protect them? If you have no cruisers, you will have no provision ships; if you have no provision ships you will have no commissariat; and if you have no commissariat the Army will starve. Therefore, I say, it is more a military question than a naval one, and I should like to see more attention given to it by military officers than is the case at the present time. It is said an army crawls on its stomach. What has been done for their stomachs? Lieut.-General H. D. Hutchinson, C.S.I.:—I should like to say in a very few words that I cordially approve the counsels the lecturer has given us. I entirely agree with him in the vigorous and courageous measures which he advocates. I believe they will appeal to this audience, and I hope, too, to that far larger audience outside the walls of this building who will read his lecture when it is printed in the pages of our JOURNAL. No doubt a Government which acts in the vigorous and determined way which he has advocated, undertakes a great responsibility; but a Government which is not prepared to undertake a great responsibility is not prepared to go to war, and had better keep out of it. War is a very terrible thing, and has many terrible aspects; but probably the most terrible aspect of war is not that which is created by the havoc of shot and shell, but by the fury of a starving and raging population. What would be the advantage of victories at sea if a starving mob were meanwhile wrecking London from one end to the other? Therefore I think that the strong and vigorous methods advocated by the lecturer are right. If in a great struggle, such as we should be engaged in on the occasion contemplated, we were defeated, then our action in the matter of capturing neutral food supplies would not really matter twopence one way or the other; and if we came out "top dog," then we could be as magnanimous and as generous as the circumstances demanded, and we should surely be

able to meet every demand made upon us for compensation. I am therefore in favour of the lecturer's proposals.

Captain J. W. OSBORNE, R.N.:—I propose to harrow your feelings for a few moments longer, if you will allow me to do so. The criticisms that I should pass on the lecturer's proposals are that they do not provide you with food at the moment when war breaks out, and that that is the time when it will be most required. You have to catch your ships; you have to telegraph to the exporters; you have to put your vessels into all sorts of new channels before the lecturer's proposals will fill our granaries. I never talk about this subject without quoting a sentence from an article written by Sir Robert Giffen in the *Nineteenth Century*. That sentence is, I think, most illuminating. It says: "My vocabulary fails me when I think of the miseries and ruin that must come to the people of this country in the first fortnight of a naval war, be it successful or be it unsuccessful." I think that a foodless people cannot go to war; a foodless people cannot support a war; and I endeavoured in this hall, when we were discussing what the standard of naval strength should be, to try and prove that our only standard of naval strength under our present economic conditions was one that would absolutely prevent war. There is no other standard for this country as we stand to-day—absolutely none. Major Stewart Murray has said that we are absolutely and entirely unorganised internally in any sort of way for war. When I seek to try and force these opinions on my fellow countrymen—and I try to do it a great deal—I find that this question of starvation is the only argument whereby I can get a tremendous interest taken in the condition and the possibilities of the Navy. The Royal Commission of 1905 reported, as we know, in a very negative way. One question that was asked of the Admiralty by that Commission was answered in a most extraordinary manner, and I should like to read it to you. The Admiralty was asked: "Assuming the country to be at war with any two of the great maritime Powers, are the Admiralty of opinion that our supplies of wheat and flour would arrive in practically the same volume as they do at present?" Practically the reply is: "Yes, the Admiralty believe that there would be no material diminution of the supplies of wheat and flour reaching the United Kingdom." That was in 1905, before the German scare came up. Although the Admiralty ought to have jolly well known that the German scare was in front of them, yet that was the answer they gave. At that time if a war had broken out between the United States and Germany and this country, what would our condition have been? Would we have been able to support a war then? I hold absolutely that we would not. The United States could have dominated all our supplies from the whole of the Continents of North and South America, and such a fleet as we would have had to send to contend with the United States would have left a very moderate remainder to fight the Germans in the North Sea. But for the purposes of my argument now, I only turn to the German scare, and I say that, assuming Germany desires to be at war with us, she will not face war unless she sees a fair chance of success. It will be absolutely impossible, and I think out of the question, to suppose that we shall bottle up the German fleet in German harbours; therefore, the North Sea will be practically full of fight, with a huge fleet on one side and a huge fleet on the other—battleships, cruisers, torpedo boats, vessels up to 36 knots chasing each other all over the North Sea. Under those circumstances, can there be any commerce in the North Sea at all? Then I ask you to turn your attention to the map of the North Sea, and notice particularly the east coast of England. Take the towns right away down

from Aberdeen to London—Aberdeen, Leith, Hull, Grimsby, Shields, Newcastle, and the Port of London, all of them closed to commerce, think what such a war would mean to them. Why, it is absolutely certain that, even in a war with Germany alone, the condition of our people will become so fearful from want of food and raw material that war would have to be stopped. The lecturer says that the question has been threshed out *ad nauseam*, but nevertheless the danger remains. So I trust and hope that everybody present will endeavour as much as possible to spread the thought of the danger. For some reason or other the public Press will not take it up; it passes it by. You will see something said about starvation, but you will never see it pressed home. The papers do not like it for some reason or other; I have noticed several instances of this, and I clearly see what the Government thinks of it, because the other day Major Anstruther Gray asked the Prime Minister whether, having in view the changed conditions since the last Royal Commission was held, he would appoint a fresh Commission with a view to ensuring an adequate supply of food for the British people in time of war? The answer was this: "As the honourable and gallant Member is aware, the Royal Commission reported after a long and thorough investigation so recently as 1905, and I am not prepared as at present advised to recommend that a fresh enquiry should be undertaken." So that you see the evils of that Royal Commission still remain. I should like to urge some of the important people in this audience to begin an agitation by sending a letter to the Press calling attention to the question, because a foodless people cannot face war.

Lieut.-Colonel A. C. YATE:—I think the keynote of the lecture which we have heard has been that of tentative defiance of International Law. I am going to quote to you an instance of actual defiance of International Law. I refer to the blockade running which was carried out in the Sixties from the Bahamas. I myself was quartered in the Bahamas in 1877, and I then heard a good deal of what went on in the blockade running days; and, when the editor of a current periodical asked me to write an article on the rifle traffic in the Persian Gulf, it occurred to me to look up my recollections of the days of Hobart Pasha and Thomas Taylor, when they ran from the Bahamas to Savannah, Charlestown, Galveston, Wilmington, etc. The one thing I found there which I think is applicable to the present occasion is the lesson which they drew from their own experiences in running the blockade forty-five years ago. The inference they drew was that, if England was ever engaged in a serious war with a great naval Power, she need not be apprehensive about her food supplies. They contended that thousands of British ships, under (I think they said) both British and neutral flags, would immediately proceed to run any blockade that was formed. Such is the recorded opinion of two bold blockade runners, one of whom afterwards commanded the Turkish Navy. Some twenty years ago I was brought a good deal into contact with Von Wissmann—the man who founded the German East African Colony—and his comrades. One, Eugen Wolf, joined Count von Zeppelin in his earliest airship trials. I was talking one day to Wolf about Heligoland, and I remember he said to me, in a tone of indignation: "You have given us Heligoland, and we gave you in exchange 500,000 square miles of territory." I have not verified that statement, but that is what he said to me. A month or two later I was travelling by rail in Germany. Three Germans were in the compartment with me playing "skart." They took no notice of me till we neared the end of our journey.

and then one of them turned to me and said abruptly: "Sie haben Heligoland verloren." I replied: "Ich glaube dass Heligoland nichts." "Ich glaub'es auch," said the German. I have thought since that neither the German nor I correctly valued Heligoland, which possesses great possibilities, both for blockading and for blockade running, and also for reconnaissance. In the course of this meeting nobody has alluded to the immense resources of wheat which we have in India and Canada, and under our control. The United States Press, I notice, views with disapproval the inauguration of the Canadian Navy. The *New York Herald* is strongly opposed to it. Canada's own feelings on the matter, prompted by loyalty to the Mother-country and a desire for the security of herself and of the British Empire, would hardly appeal to the United States Press. My own earnest hope is, that the Canadian Navy and the Canadian granaries will guarantee the food supply of this country in time of war.

Sir THEODORE ANGLIER, Bart.:—I have listened with the profoundest interest to the, I should almost style it, subsidiary course of lectures that we have had in addition to the lecture given by Mr. Owen, because I have not heard one speaker pin himself to a consideration of the lecturer's propositions. The additions which have been made have been general observations and propositions on the old topic of the food supply in time of war, and many of them certainly do come with a certain amount of freshness. I want to pin myself to my friend's paper, and to the recommendations contained therein, because I do not think there is time to discuss anything else. I look upon the subject in the light of my daily occupation, that of a shipowner, and in the further light of an old subject of one of the greatest Empires that has ever existed. I have always been a constant seeker of knowledge of that grand old Empire and how it stands, because your practical business man always wants to know how he stands—whether he is safe and progressive, and can go to sleep comfortably. Whenever any question is raised to-day, no matter where or what it is about, the thing that is always said is: "Where do I come in? How does it affect me?" I represent one of the greatest industries in this great Empire, the industry that has built it up, and propositions of the kind the lecturer has put before us to-day affect everyone concerned in that greatest of industries. I must say that I feel perfect satisfaction in looking upon the paper as a plain, commonsense proposition. The feasibility of its recommendations are almost guaranteed by one important provision that Mr. Owen does not forget to mention, and that is compensation—compensation for every interest, individual, or national, affected by his proposed action. Do you think the United State or any other Power would trouble their heads about a proposition like this when they get a full and reliable undertaking for indemnity? My friend Professor Holland whispers to me: "Oh, yes"; but you know that, after all, everything is boiled down to a question of money in these days. If we were in the position to go to war—and I take it we would not attempt to go to war unless we were in that position—or if the war was not of our seeking and we had to fight it out, would we bother our heads about International Law and the consequences of disobeying it? Never! If we honestly said to the world: "For our acts we stand to pay, and pay liberally," you would have the whole of the people of the world in your favour and you would carry them with you. As far as shipowners are concerned, they would take jolly good care to obey orders when they were paid for doing so, and, as has just been said by another speaker, it

would not take them long to have a try at running a blockade, or anything else, if you pay them for it. You wait and see! The whole thing hinges on that provision—compensation. We must all recognise the fact that has been so repeatedly asserted here to-day, that in time of war we should have no use for magnanimity nor for the lawyers—we should not employ them, after our latest experiences.

Colonel W. T. DOONER, late Royal Inniskillen Fusiliers:—I think you will all agree that the statement the lecturer made at the commencement of his paper that he had been informed that this question had been threshed out *ad nauseam* was a mistake, and that we are all delighted he has come here to-day and read such an interesting lecture which has led to such a good discussion. He has referred to the question of the number of loaves that are made in this country out of foreign wheat, and has stated that with the increase which is likely to occur in the population of the country 95 out of every 100 of the loaves consumed in the United Kingdom will, a short time hence, be made from foreign flour, so that practically the entire population of these islands will have to be fed—as the lecturer expressed it—over the ship's rail. I want to ask Mr. Owen a question on that point, namely: As apparently granaries are condemned, whether the Royal Commission investigated the possibility of giving bounties to farmers to keep a stock of corn in rick or in stack for four or five months, and thus we should always have a reserve in case of war? It is very difficult to keep out politics in discussing a most important question like our food supply in time of war, but as other speakers have gone very near the political line, I would like to ask Mr. Owen also whether the question of Colonial preference was considered by the Commission. I am induced to refer to this preference question by a speech made by Lord Rosebery in Edinburgh, or somewhere in the North, some years ago, in which he said that a preference of two shillings per quarter on corn would not do agriculture the slightest good. Many of us will agree with his Lordship in that statement. But the point I want to make is, that at another meeting shortly afterwards, he informed his audience—as far as I recollect—that the result of imposing a preference would be that in all our Colonies the farmer would be growing corn to his heart's content, and that the shiploads of corn that would come into this country would injure agriculture. The papers took him up the next day and said he could not have it both ways. My own idea is, that if we could only get the Colonies to grow corn in the way that was suggested, if we had a fleet sufficient to protect the ocean highways and the ships bringing us these loads of corn, then these scares and difficulties would not arise if war was declared. These ships, if coming from Canada for instance, would endeavour to reach some of the many harbours on the coast of Ireland, and they could afterwards be conveyed to England or Scotland, and thus our food supply in time of war would not be in the precarious and uncertain state it is to-day. The last point I want to refer to is one mentioned by a previous speaker, namely, that a foodless nation cannot fight and cannot go to war. Some of us who are Guardians of the poor, and members of Distress and Unemployment Committees, and have to listen to tales of woe and suffering in times of profound peace, almost shudder to think of what would take place were we at war with some European nation. Major Stewart Murray stated that about 30 per cent. of the population would come on the Poor Law in time of war. Why, we could not possibly deal with such a number. Where would the money come from? You hear of ratepayers nowadays who simply cannot meet their engagements at all with rates at 9s. and 10s. or more in the £.

As I am on my feet I hope you will allow me to say, that I wish the President of the Local Government Board, Mr. John Burns, would never allow a local body to borrow a penny till the rates are down to 6s. 8d. in the £. I think this almost reckless running into debt of local authorities should not be permitted. I will only say in conclusion that starving people, hungry men with hungry wives and children, even in normal times, are difficult persons to deal with, and if in time of war, with a scramble for flour, as has been suggested, at £5 or £10 per quarter, we had such things occurring, as a previous speaker hinted at, we would be simply starved out at once and unable to continue any campaign.

Admiral the Hon. Sir EDMUND FREMANTLE, G.C.B., C.M.G. (Rear-Admiral of the United Kingdom):—I regret I have not been present to listen to the, I have no doubt, very interesting discussion that has taken place. This is a subject to which I have given considerable attention. I have studied the Blue Book dealing with the question of our food supply in time of war pretty fully, and a year ago I wrote a pamphlet about "Our Oversea Trade in Time of War." I only say that to show that I should have liked to deal fully with the subject; but I do not intend to do so now, because of the lateness of the hour. But I do wish to make two remarks on what the lecturer has said. The first point to which I wish to refer is the carriage by neutrals to neutral States. It seems to me that that is an extremely difficult thing to interfere with. Of course, it is possible that we might be able to do so. I have observed that, although it is generally said that neutrals will take care of themselves and will prevent any belligerent from interfering with them; I notice that they do not do so, generally because, as a rule, they are doing very good business as neutrals. In proof of that I would refer you to Captain Mahan's "War of 1812," where he mentions that notwithstanding the gross outrage which took place when one of our ships, the *Leopard*,¹ forced the *Chesapeake*, after an action, to give up some British men-of-war's men that she had on board, no war resulted, although diplomatic correspondence went on for five years later, and the probable reason was because they were doing a very good business. Then I want to refer for a moment to our ships going to neutral States—such a thing, for instance, as our ships going to Belgium. We know perfectly well that the food supplies which go to Belgium would go to Germany in most cases, because a very large proportion of the imports of Germany, we are told by the Official Returns, do go through either Belgium or Holland. All I wish to say with regard to that is, that we could deal with it by Orders in Council. As regards dealing with the question of neutrals going to a belligerent and landing on a belligerent's shores, we have only to declare a blockade to get over that difficulty. That is entirely in accord with International Law, as I think Professor Holland will bear me out. But my reason really for intervening at all in this discussion is that I am afraid a great many people, a great many outsiders would say: "You are dealing with our food supplies, but have left out the principal part; you are playing 'Hamlet' with the Prince of Denmark omitted, because in dealing with our food supplies the course to adopt is to make private property at sea immune

¹ In 1807 the *Leopard*, a 50-gun British ship, knowing that the American frigate *Chesapeake* had some British deserters on board, demanded that they should be given up; this being refused, an action took place, the *Chesapeake* was worsted, and gave up the deserters.

from capture." You may have noticed in the papers to-day that a discussion took place yesterday on that subject. Sir John Brunner occupied the chair, and the lecture was given by Mr. Cohen. I am not going into that question fully, but I wish to call attention to it as it has been entirely left out by the lecturer. I do not know why he left it out, because it was not omitted from the consideration of the Royal Commission on Food Supply, and if I recollect aright, Professor Holland raised some objection to the question of the immunity of capture of private property in case of war having been brought into the report.

Professor HOLLAND :—That is so. I deprecated that being mentioned at all; I protested that our reference did not cover that at all, and I was very sorry it was touched upon in the Commission's Report.

Admiral FREMANTLE :—That is what I was referring to. I quite agree it ought not to have been put in, but it was mentioned, and there is an end of it. I wish to say, as a naval officer, that all the discussions which have taken place about that—and I am sure Sir Gerard Noel will agree with me in what I say—appear to me to have been of a purely academic nature, because I cannot imagine any Commander-in-Chief allowing ships to go backwards and forwards, giving information about what he is doing; nor can I imagine that it would be possible that, in case of war with Germany, a German ship could go into Southampton and quietly do business there. Why, of course, everybody would say, whether it was true or whether it was not—and it probably would be true—that she was full of spies, and that she was only doing business in disguise. Can you imagine that any German Admiral would for a moment allow any British ship to go anywhere near him in case of war? It is a thing which is impossible in my view. When it is said that the proper thing to do is to make private property at sea immune from capture, so that our food supplies will arrive all right, and that we have nothing to be afraid of—as was seriously argued in the discussion reported in the papers this morning—all I can say is, that it appears to me that, although it may be seriously argued, it is argued absolutely without knowledge of the technical naval questions involved.

Mr. ROBERT EDMONDSON :—I think great credit is due to the Executive of the Royal United Service Institution for bringing forward a subject of this kind for discussion. Two speakers this afternoon have touched slightly upon the question which I wish to raise, and that is the dangers that would arise in time of war from half-starved people. If we were to have war to-morrow with a naval Power, say France or Germany, or a combination of naval Powers, I can assure you that it would be very soon over, for this reason, that the hungry and starving people of this country would simply rise, and there would be chaos and bloodshed in less than a fortnight.

Mr. DOUGLAS OWEN, in reply, said :—About this late hour the question of "food supply" is apt to be active and personal, and I will therefore make my remarks as short as possible. I have been under the disadvantage to-day of having introduced considerations entirely new—new even to Professor Holland, which is saying much. Professor Holland, who commenced, much to my regret, by saying that he would not take up his full ten minutes—and he was true to his word—naturally pitched upon the weak point, the first point in my case. I was, indeed, doubtful whether

I should introduce it at all. I refer to the right to take possession of neutral property. On this one item, so far as International Law is concerned, I am entirely in accord with Professor Holland. But to my regret neither he nor Major Stewart Murray, whose remarks I heard with much interest, had anything to say; in fact nobody had anything to say except Sir Theodore Angier, on my main propositions, 1, 2, 3, and 4. I raised the question of the treatment of neutrals because I wanted to have it on record, and as I now have it on record, I have done with it. But that is not my main proposition. My main proposition is contained under the suggestions 1, 2, 3, and 4. Unfortunately, however, they are all new propositions, but doubtless people will consider them presently, and I certainly hope that Professor Holland will do so. I believe them, myself, to be entirely sound. Colonel Yate, I think it was, said that my lecture was an attack on International Law; I wish to claim that, with the one exception, that it is not so. My main propositions 1, 2, 3, and 4 are not against International Law at all. As Sir Theodore Angier justly said, my proposals have been the occasion for a series of subsidiary lectures. Many points that I did not mention have been dealt with, and I have been rather criticised because I did not refer to this or that amongst them. But I did not want to occupy time by referring to anything that had been discussed before. We have had the granary question, the national indemnity question, and so on, discussed over and over again. I therefore confined myself simply to these four points, entirely new, as I believe, which I desired to have discussed. A good many questions have been addressed to me to which I will reply as shortly as possible. Lord Ellenborough said that the days of grace in the time of the Crimean War were a mere diplomatic formality. That may have been so, but a diplomatic formality of no importance at the time may have far-reaching effects, and it is those very effects to which I wish to call attention. What may have been a mere formality has become almost International Law, although it is not International Law; in fact, it is opposed to International Law. I entirely agree with what Mr. Harry Quelch said on the subject of increasing the amount of food grown in our own country; but at the same time, if every available acre in the country were devoted to corn, we should not have enough for our consumption. Just as the Phœnicians had to get their corn from Solomon, and as, later, the Greeks and Romans had to go abroad for theirs, so we have now to go abroad for ours. Major Stewart Murray is, in my judgment, absolutely right when he says that some scheme for the organisation of relief in time of war should be arranged in time of peace. That is a most important subject. Captain Osborne complained that my scheme will not provide us with food when war breaks out. Of course you cannot pull a wire and have food drop down on the country; but what I am aiming at is the prevention of panic. I have emphasised the fact that it is the fear of shortage that will create a panic, and if the public can be satisfied that there will be no shortage, then we shall have no panic, or very much less panic. If the public are satisfied that we shall be able to bring in our own ships bound to other places, and that these ships will be coming in to-day, to-morrow, to-morrow week, and the week after, so as to maintain the ordinary supplies, this will allay panic, and that is the main object of my lecture. It is not the actual shortage that I fear so much as panic due to fear of shortage. With regard to the question of the insurance of food supplies or a national indemnity, I worked out a scheme of such indemnity at the expense of much labour, which I put before the Royal Commission, as I have stated. The witnesses, however, of whom I was one, so disagreed amongst

themselves that the Commissioners said: "We cannot recommend anything," and they did not. But that does not at all affect my opinion on the subject of national indemnity. I believe the proposal to be right. As to the question of the immunity of private property, it was outside my subject. About four years ago I had the privilege of reading a paper here on that very subject, and I did not intend to raise the question again, whether I still hold the same views or not. I thank you for the attention with which you have listened to me.

The CHAIRMAN (Admiral-of-the-Fleet Sir G. H. U. Noel):—As no other gentleman apparently desires to speak, I will just say a few words in closing the discussion. Food supply is absolutely necessary in war time, and it is the principal duty of the Navy to guard and make safe the ocean. There have been many changes of late. We have withdrawn a great many ships from abroad, and have concentrated nearly all our force in home waters. There is a very good reason for those changes, but we should make up for the deficiency by building more ships for the protection of our interests abroad if we are to make our food supply secure. I was a member of the Royal Commission appointed in 1903 to report on "The supply of food and raw material in time of war," but unfortunately I was called away on duty and had to leave before the Commission came to an end. It was a very interesting Commission, as you may imagine, and though it ended perhaps in a somewhat unsatisfactory manner, the Government has got an exceedingly useful lot of information if they like to study the Minutes. I think that the collecting and tabulating of important evidence may generally be considered as the chief use of a Royal Commission; it is not so much what they finally agree to report. One of the gentlemen who has taken part in the discussion wanted to know whether the questions of granaries and farm produce were considered. If he will look at the Minutes he will see that they were thoroughly gone into. The principal question to be considered, as far as I am able to refer to it in the short space of time available, is the Navy. Naval action in war will, and must, to a certain extent, be guided by International Law; but where we find we cannot reasonably do this, why, we shall have to break the law. I quite agree with our lecturer in all that he has said. The last thing to do, of course, would be to interfere with neutrals; but if it is necessary, we must do it. It is very late, and I will not trouble you much more, but there was one question raised about blockade running, on which I might say a word or two. Blockade running is a thing that will have to be organised; and this cannot be done in the first period of the war. The difficulty will be to keep up the food supply during the first few weeks—as those who have spoken have told us—I am afraid there would be great trouble in England when the food began to get short. Blockade running, therefore, would not obviate this, and I think is not a thing that we can consider. The one thing that we can consider—and I am sorry it has been ruled out—is national indemnity. I am very sorry that no right conclusions were agreed to by the Committee that enquired into it. Many opinions are, no doubt, held on the subject, but I am certain in my own mind that it could be worked. A national indemnity which protected our food, brought to this country in British bottoms, would prevent a lot of trouble, and possibly secure our food supply. I am sure you will all agree with me that we have had an exceedingly interesting lecture, and one of the proofs of it is that it has been so well discussed. I thank you for so discussing it, and I convey your thanks to the lecturer for his very excellent paper.

The following letter has been received from Mr. H. Chaplin, who was to have taken the Chair at the meeting:—

11th November, 1909.

DEAR COLONEL LEETHAM,—

I was very sorry not to be at the meeting of the Royal United Service Institution yesterday, and I might have been after all, for I had to postpone going to Paris, but have been obliged to lay up in bed with some trouble in a vein since I spoke at Edinburgh to a great meeting on Friday last.

I should be glad if I could have a fuller copy of Mr. Douglas Owen's paper than I see in *The Times* to-day, for what I do see, I must confess, does not commend itself much to me.

No one ever reads the Reports of Royal Commissions in these days. But if those who are interested in this question would examine the Supplementary Report of the Royal Commission on the "Supply of Food and Raw Material in Time of War," published in 1905, they would find fully discussed in that Report, in clauses 82—96, a scheme which the Commissioners thoroughly examined, and in clauses 96—101 their recommendations of the scheme and the reasons for it.

I may say that it was founded on an offer from the Trafford Park Estate Company, to provide, by means of elevators by the side of the Manchester Ship Canal, unlimited capacity for any storage of grain that the Government might require, and at a cost which would not have added more than one quarter per cent. to what was annually spent at that time on the national defences of the country.

I still believe that the offer made at that time, coupled with the further recommendations with regard to it, made by the signatories to that report, would have been sufficient to secure all the storage that could be desired.

I may add that it was also recommended in the main report, which was signed by all the members of the Commission, that a scheme for offering storage, rent free, should be tried as an experiment, in paragraphs 261 and 262.

Yours truly,

HENRY CHAPLIN.

P.S.—I may say that the scheme referred to was proposed by Mr. Marshall Stevens, Managing Director of the Trafford Park Estate—a man of singular ability—and will be found in Section 82 and following sections of the Supplementary Report, and also in the Appendix, page 140 of the volume. I would also commend for careful perusal Sections 96, 97, and 98. With regard to the two latter (97 and 98), they could be made, of course, to ensure any supply that was desired; and as Tariff Reform, involving a duty on corn, is now the accepted policy of the Unionist Party, that difficulty in the way of our proposals would disappear in the event of a change of Government. May I add that as I drafted the whole of the Supplementary Reports myself, I have, or rather I had, the subjects at my fingers' ends, and had I but been here, with a leg-up, should have asked leave to state my views at your meeting. Cunyng-
hame, who proposed the scheme in Sections 97 and 98, was at that time an official very high in the Home Office—in fact, next to the Permanent Secretary.

READINESS OR RUIN.

By T. MILLER MAGUIRE, M.A., LL.D.

Barrister-at-Law, Inner Temple.

On Wednesday, 5 May, 1909.

Major-General Sir T. FRASER, K.C.B., C.M.G., in the Chair.

"To all nations war is a great matter. Upon the army death or life depends. It is the means of the existence or destruction of a State; therefore, it must be diligently studied."—*Sun, the Chinese Master.*

"The Kingdom of Heaven is compared not to any great kernel or nut, but to a grain of mustard seed."—*Bacon.*

"Degenerate arts and shifts whereby many counsellors and governors gain both favour with their masters and estimation with the vulgar, deserve no better a name than fiddling."—*Bacon.*

"Neither is money the sinews of war if the sinews of men's arms in base and effeminate people are failing."—*Bacon.*

"No nation which does not directly profess arms, may look to have greatness fall into its hands."—*Bacon.*

"To be masters of the sea is an abridgment of a monarchy."—*Bacon.*
[But sea power alone never gave security to any Empire in any age.]

"Let any Prince think soberly of his forces except the Militia of his natives be of good and valiant soldiers."—*Bacon.*

"Let no nation expect to be great that is not awake upon any just occasion of arming."—*Bacon.*

"The causes of defeat come from within."—*Sun, the Chinese Master.*

"Nought can make us rue if England to herself do rest but true."—*Shakespeare.*

"In regard to war, wise expenses is true economy."—*Pitt, Earl of Chatham.*

"In the fall of Venice, think of thine, despite thy watery wall."—*Byron.*

Alexander, Marcus Aurelius, Tamerlane, Bacon, Turenne, Napoleon, Napier, Jackson, Moltke, Roberts, Wolseley, and scores of other great authorities, all agreed that the wisdom of Policy and War can only be learned from History.

The great wars, 1793-1815, illustrate every phase and every cause of victory and defeat, which can also be studied with almost equal advantage in the pages of Thucydides, Livy, Polybius, and Gibbon.

THE maxims at the head of the summary of the lecture which has been circulated are in themselves a lecture, and, if carefully studied by politicians, would prevent them from the ghastly blunders which, in the annals of many a State, prove that there is no choice between Readiness for War or Ruin, temporary or lasting, but at best appalling.

Not only do the authors above quoted set forth the lessons of universal history, but also every successful General who surpassed or subdued his contemporaries, and whose career has altered the destinies of any race, lays it down as a maxim for the guidance of leaders of mankind that it is only by reading and re-reading, by careful study and by profound reflection that the nations can be either properly prepared to defend themselves against their neighbours, or by assuming the offensive themselves, anticipate and prevent invasion, and turn the easy offensive of an aggressor into a costly and ruinous defensive. But in our country, and indeed in other countries also, as we shall see, these vital questions are often left to chance or entrusted to the care of base self-seeking adventurers, vote catchers and mere arithmeticians and sophists, skilled to gain the applause of the vulgar, but as to true policy—to them applies the saying of Themistocles, who, when desired at a feast to touch a lute, replied that he "could not fiddle, but he could make a small town a great city." There have been many modern professors of Monarchical and Democratic statescraft who could fiddle very cunningly, but so far from being able to make small states great, their gift lay the other way to bring a great and flourishing state to ruin and decay. See Bacon in that Essay 29, which every soldier and legislator should learn by heart.

In war "Readiness is all."—It is a kind of dissolution of the civil and ordinary conditions of natural life. If any careless, luxurious, sporting, gambling, ignorant community be not ready when in a great crisis of its fate, there is no escape from death and the contemptuous judgment of posterity. "There is no room left for repentance, none for pardon left." There may be death-bed repentance for an individual, there is none for a State.

The gallant Chairman introduced me with military prompti-

This lecture was delivered extempore and illustrated by large wall maps; but it can be followed by the help of any ordinary atlas.

tude, so that I had scarcely time to collect together the enormous supply of materials which is before me, and, therefore, I must trust to my memory for what I have to say on this occasion. I have been impressed to an extraordinary extent recently, not merely by any fears of my own for the future of the Empire, but by the singular state of apprehension which exists amongst practically all classes of His Majesty's subjects. Wherever one goes, one hears not exactly utterances of despair, but certainly the utterances of men who are very dubious, very uncertain about the continuity of the greatness of their country. Having regard to the fixedness of purpose, to the long reputation for success, and the tremendous energy and the marvellous expansion of the race, as set forth on that map of Europe, these utterances puzzle and perplex me. And the remarks are not confined to the very unsatisfactory state of the Navy and the Army. They are of a far-reaching kind. For example, we are informed by almost every politician—I am not going to favour on this platform one party or to commit myself to any party—we are gravely informed by many leaders of politics, and by many leaders of finance, and by many shopkeepers and lawyers, indeed by every class, that our security and carelessness and cult of games will sap the foundations of our commercial life. Surely this is a very serious matter.

We are told everywhere we go that the race, if not exactly deteriorated already, is certainly deteriorating. I was at a large meeting recently in the Mansion House, in which prominent authorities took part and heard very pessimistic views of the coming race of Great Britain. Unless radical reforms are forthwith introduced, Britons won't be fit for their responsibilities. This doctrine was also preached not long ago in the Royal Colonial Institute.

In this Hall the principal topics discussed relate to the twin pillars of our State. Undoubtedly, in every age, and under every condition, the men who fight for their country by sea or on land are pillars of the State; and to promote their well-being and to insist on an ample supply of everything which conduces to the efficiency of these forces, and to their absolute fitness to "talk to their enemies at the gate," is the whole aim of the existence of this Institution. But this Institution must necessarily also be concerned with the foundations of all greatness and with the bed rock on which are built these two pillars of the State. What is that? The family. The man of strength, of body and brain, the rich man of brains fit to lead his people; the poor man of body fit to fight for his people and protect his wife are the product of healthy, skilled, strong, earnest parents. The principal point of all material greatness is a race of military men, and to secure that our race is fit for Empire is the ardent desire of all our members. This is our *raison d'être* as a Society—to protect and elevate our race. Such a race need fear no enemy in any just cause. This is the gist of human experience. Lord Bacon, the greatest British philosopher, says,

"Neither is money the sinews of war if the sinews of the man's arms in base and effeminate people are failing." And he goes on to say, let any Prince, whatever his ordnance, whatever the population of his cities, whatever the material wealth, think meanly of his resources, unless the breed and disposition of his people be stout and warlike.

Your experience, Sir, is remarkable, reaching from Constantinople to the Franco-German War—in fact, I believe you helped to rebuild for the Turks the defences of Constantinople—the fortifications once stormed as against the decadent Greek Empire by Othman's race.

You will admit that there is not the least use of talking, except from the temporary point of view, of the strength of the Army and the Navy unless we are able to secure a breed of healthy men and sound women, and to secure conditions of life in which the childhood of the people, the very soul of the people, may be trained to be useful, strong and energetic and valiant. Chivalry, Bushido, Manhood, fair women and brave men form the very cynosure of existence.

The elements of strategy of our nation are the Navy, Army, money and food, physique and brains—these six—there were never any other six than these—all depend on the woman, the mother worshipped by many a race for being a mother. I say that these questions are now, in the opinion of the public, matters of the gravest apprehension.

I was at a gathering at the Mansion House to discuss sociology and the conditions of modern English social life. I had expected music, conversation, the charming presence and the company and conversation of the ladies. The ladies were there and the music was there, but neither the ladies nor the men paid much attention to anything except to one question: how long is this Empire to last? Is it true that we may be invaded? Are we degraded by a base and worthless civilisation as honest lawyers and the Bishop of London assert? Is it true that nothing will awaken the mass of our rich, or of our poor, to a sense of their responsibilities, except invasion or revolution? "Is that true?" I hope that it is not true. But the only possible way from preventing this theory from becoming all too true is to listen to the most certain oracles of time and the experience of mankind, as set down in the synopsis of my lecture, and prepare in time.

I mention the Mansion House meeting because London is the centre of the whole British Empire, and is also to a considerable extent the centre of all the commercial interests, and credit and financial concerns of mankind. Look carefully at the map and the position of the United Kingdom, and of its lines of communication with all our Empire, and weigh the position and the dangers of London. Therefore, we frequent the City of London and associate with its merchants in our happier leisure hours, even as we frequent the miserable abodes of wretchedness and poverty in our less happy leisure hours. Strategy and

Politics, Greatness and Decay, like Death visit alike the palace of the noble and the rich and the garrets and cellars of the lowly and the outcast. The only way whereby any man can attain that knowledge and that wisdom which are necessary for even pretending to give advice in a crisis such as this is by patience and tribulation. At the Mansion House meeting the week before, I was listening to distinguished persons—not mere ordinary citizens in their way, but men of light and leading. They all admitted that there is no use in shirking this deplorable fact, that the mass of the British community were rapidly in danger of losing their manhood, their womanhood, and of being incapable of reproducing a fighting race. British mothers will soon, in Lancashire and in Hoxton and in Homer Street, Liverpool, and between Liverpool and Oldham, and in Glasgow and Dublin, be unfit to give birth to men. These are not my words; they are the words of an ex-Lord Chancellor, of Financiers and Bishops, and are confirmed in the public press.

But the recruiting returns and the low physical standard for the army and the increasing difficulty of getting sound lads for the navy, and the awful difficulty of getting officers up to the level of education of their status, speak for themselves. I am very thankful indeed for the opportunity of showing from history as well as from *a priori* reasoning, that our people, like every other people, must devote yourselves to being ready for war, and that if you do not, you will see from the records of every other country how serious, how costly, and how terrible and deplorable a matter it is not to be ready for war. Now, the question, therefore, divides itself into, first the navy, then the army, then the state of education of the richer rank and the physical and mental capacity of all ranks. I hate the word class—there only ought to be one class among Britons, whatever their rank, there ought to be one great humanity, self-denying, self-respecting family or clan, just as to a very considerable extent all Mahomedans of every colour and rank are brethren.

Is the education of the richer folk, is their study, are their objectives and their ideals, are their occupations in their leisure hours, is the general tenour of their life such as to fit them to be leaders of a race with responsibilities in all the territory set forth on our map of Empire, eleven to twelve million square miles occupied by hundreds of millions of every colour and creed?

A vital question for every race always is War. Are we ready for war? When are we going to get ready for war? What would be our condition if we were not ready? And what were the conditions of other nations when they were not ready? I propose to take these *seriatim*.

Now for the first, the Navy. You have in the summary before you the opinion of Lord Bacon, who cannot be read too often, that the command of the seas means command of both the Indies, *i.e.*, Asia and America. To our Nation, even in his time, the command of the sea was the "principal dowry of

Great Britain." That is a fine phrase, that is a splendid inheritance, that is a noble tradition of which now even the most decadent Briton in the slum of London or Glasgow is proud. You can hear "Rule Britannia" sung by poor wretched folk in the sorry refuges of hopeless poverty. That was Lord Bacon's opinion in 1612. We are now in 1909. If the command of the sea was of vital importance then as a contingent remainder, so to speak of our inheritance as the security for our future estate, at a time when Englishmen grew enough food and to spare close to their own homesteads; what is command of the sea now to a nation that cannot live on its own food supply for three months? It could exist then for years, if it lost sea power, though, of course, it could have no empire.

But ours is a nation linked by strategic communications with every coast, and having a sea-borne commerce worth £1,700,000,000 a year, without which its humblest people, as well as its richest people, could scarcely buy their daily bread or carry on the simplest industry; whose land frontiers touch every great power, requiring continual intercommunication and circulation of its soldiers, with coaling stations in every sea, with Colonies depending for their existence upon us, and with brown and black and yellow races of all degrees of civilisation hanging on to us. If we disappoint humanity as Captain Mahan described in his magnificent essay published a few weeks ago, if we let that empire go, there is scarcely a single family on earth that would not be affected. A new power, the United States, strong as it is in land resources, and mighty as is its wealth, and deplorable as is the condition of too many of its people—ground down like our factory operatives by the most accursed system that ever existed upon earth, the paltry profit-gaining Manchester school of economics—the United States would feel our loss also. This is not my saying, it is Captain Mahan's.

Some silly editors have recently been contending no one ought to discuss these questions except a naval expert. One might as well say that no one ought to go to law unless he is a judge, or feel a toothache unless he is a dentist. But I have before me gentlemen who are naval experts, and I leave naval technicalities to them. I ask them are they satisfied? Is it a worthy thing for a nation like ours to drift even near to a naval disaster? Would it be a worthy thing even for any person in this room whose health is indifferent and is in danger of death in two or three or four or five years, or even in ten years, not to insure to the full amount of his resources for his family? Is it worthy of any man to be indifferent for even one day to the future happiness of his child? Would it be a worthy thing for any of us to be indifferent to such an appalling catastrophe as may fall upon the mass of our people if it be true—I do not say it is—as was said in Parliament, not by Mr. Balfour, but by the Prime Minister and Mr. McKenna? If any of them be telling the truth—if all of them be telling the truth, if politics be not one congested concatenation of the incarnation of lying, then

it becomes us to think over their statements as to the Navy and insist on its being able to cope with all possible adversaries. The Navy may be in danger if we do not shake off sloth and listen. I leave the answer to Naval officers present.

There are many ladies here; the answer interests them even more than the men. When Paris was invested the women were more miserable than the men; and when they saw a little child crying for bread, both men and women felt that the unreadiness for war affected the child more than either of them. And what unworthy folk they were to be gulled by politicians or by self-seeking military men, the baser tools of political schemers, into putting that innocent little child into that position! It is perfectly clear that it is not panic or unmanly to be prepared for danger. When I am told that we are in danger of our life through having gangrene, or, indeed, a much less distressing malady, is it not unmanly not to go and see doctors? Suppose any expert said that you had a gangrene or appendicitis, would it be worth while spending a few shillings or a few guineas just to test his judgment? And so, if we are told by any expert that we are going to ruin our nation in five years unless we are prepared, is that not a topic worthy of discussion on any platform? Must not a remedy be applied if they are right—and if they are exaggerating at any rate we may be assured that we are not going to ruin and we are at pains not to deserve ruin by carelessness and stupidity, or worse, by party spirit and recklessness.

This is a matter that comes home to the business and the bosoms of us all—it is not a party matter—we cannot trust the life of our race to mere officialdom, bureaucratic self-conceit, or even to Parliament. Parliament is only a very poor voice of the people—a very uncertain voice, a very capricious voice, a very ignorant voice, and very often a very knavish voice—not alone in this country but in other countries. I advise you, therefore, to begin to look into the matter yourselves, and in so doing I am echoing the late Lord Salisbury, who said that the condition of the defence of the Empire, and of these Isles in particular, is not only a matter for abstract political or metaphysical strategists, or dialectic tacticians, or philosophical humanitarians, but for every man, woman and child in this land as it would be for the consideration of populations in other lands, such as Germany and France. So much for the Navy. I simply throw this out as a subject for discussion, not as a matter of which I personally could say anything that could throw any further light on the existing state of things. I have here before me the view of a great number of authorities which I could go on reading till midnight, all of them of the utmost significance, and every one of them, without exception, tending to convince students who may be called a kind of jury in the matter. In this case the jurors are asked to believe by both sides to the issue that one main contention is true, that if

England does not take care, within ten years its condition will be awfully serious, if not irreparable. This is all I have to say about the Navy and its readiness. If it is not ready our fate will be far more deplorable than that of France in 1871, or even Russia in 1905. A few years ago we were discussing here and elsewhere a political and strategic monstrosity called the "blue water school." Of all the foolery that ever yet temporarily eclipsed the judgment of mankind this preposterous school was the most absurd. Even if there was any blue water, which there is not. There are Yellow seas and Black seas and Red seas, but no blue seas. The notion that any nation in any age of the world was ever saved by mere sea power or by a blue water school, or any other similar sophistry, is unfitting of discussion in this room, in which the only elements of national security are accepted as outside the range of cavil, let alone serious discussion. They are axiomatic.

But we must have an Army. An empire must have an efficient military as well as naval force. We cannot keep our Empire, whoever else might keep an empire, if the army was not brought hither and thither under the guardianship of the navy, and if the navy is not supported in every part of the world, by landing parties of the army. Is not that a truism? Is it not the most certain oracle of time? I go further, and I say that never yet in your history, or in any other history, was any war brought to a successful termination as against a Continental State by sea power alone. Take the Peninsula war, badly as it was managed at first. It was the ulcer, according to Napoleon, that sapped his strength; and it was the British army in the Peninsula which was the nucleus of the ulcer which wore out all the energy of his brilliant marshals. Take Waterloo: it was not the navy that charged, but the Union Brigade. So has it been all through history. Take Carthage; take all the lessons of mankind. I go further, and say that no naval power unsupported by a military expedition ever yet took one great maritime fortress. Is that true? I think the gallant General under the gallery will agree with me, and if I am supported by General Hutchinson I have a very competent ally. I fear that some of the ladies might not know as much as General Hutchinson; I will give them a few examples. Was Sebastopol taken by the navy, when we had invincible command of the sea? Was Charleston taken by the United States navy when the Federals had command of the sea? Take the United States against the Spaniards; was Santiago taken without the aid of the soldiery? Now take Port Arthur. Whether Port Arthur was defended in one war by the Chinese, or in another war by the heroic Russians, in either case it was not the navy that took Port Arthur, it was the army. So then, with all due respect to the navy, and insisting on it and valuing it above all things, and recognising the truth now of Burke's words in 1797, when he said that you could

not mention a ship, however small, of the King's navy without having immediately brought up by connotation to your thoughts some record of heroism in every part of the world, we cannot do without an army, and the smaller its numbers the greater must be its efficiency. No amount of political chicanery can get away from the fact that the army is as necessary as the navy in our Empire. Now, do any gentlemen in this room believe that our army at the present moment is made efficient, either by the system of recruitment or the home life of recruits before enlisting, or the kind of chivalry and bushido that prevails among the families of these poor men, or by the tone of officialism, or by the encouragement of Parliament, or by the armament which, I believe, is not now up to that of other States in guns or rifles? It is a terrible and villainous thing to send a soldier abroad to risk his life for his fellow citizens with inferior armaments, and knowingly with inferior armaments to those of the enemy.

If our nation with an income bringing in £300,000,000 a year more than the Germans is worse off as to armaments than the Germans, if that allegation be true, then a deadly scandal is being inflicted on us all as well as quite unnecessary risks on our soldiers. With regard to your regular army, we know very well the splendid work of Generals like Sir J. French, General Smith-Dorrien, and other leading officers of the army. We also know that the drawbacks under which they labour are not their own fault, but the fault of society. Defects with regard to education, instruction and other matters, are not their fault, but the fault of environment against which every one of our leading Generals has protested for twenty-five consecutive years. I ask is the regular army sufficient in guns and other weapons, in horses and commissariat wagons and all kinds of other stores? Are they as ready as other regular armies? Take Germany: every corps in Germany is set forth here (indicating places on a *dislokatione* map), every German squadron, every German gun and every German battalion, there you have them. Their duty is bound up in that map of Central Europe. The 5th Army Corps is in Posen, the 6th Army Corps in Silesia, the 10th in Hanover, and so on, and a great mass of men looking towards France there. Here is the French Army (indicating the position of corps on a French map.) Take the 18th Corps; here it is at Bordeaux. You will find every corps indicated. There is no secrecy about the matter.

I am tired about all the secrecy and anti-German ravings of the yellow Press—they are mere ignorant futilities, though some of their members boast that they and not the Army Council "boomed" the territorial Army. This information can be bought for a few shillings. Any intelligence department anywhere should know all about the resources, financial, military, naval, food supply and location of every neighbouring army.

The functions of these corps are strictly limited, but the functions of the British army are unlimited.

"Icing the Pole and in the Torrid Zone
Dark—heaving, boundless, endless and sublime."

There were eighty different campaigns in the reign of Queen Victoria alone. Have you a sufficient regular army for the multitudinous duties of the richest of Empires, the most populous part of the world except China? I believe that China will crush you if you are not very careful—this I am informed on the very best authority. My views are confirmed by a conversation I had recently with some of the ablest officers in the German army, who are becoming greatly afraid that twenty or thirty years hence it will not be the British or the Russian who will threaten the effete civilisation of industrial and degenerate Europe, but a far more dread invasion than that of Central Asian Tartars or Turks. An invasion of Mongols. The Germans centuries ago met and repulsed the enormous rush of their all overwhelming horde in the district where I point out on the map the headquarters of brigades of the 4th and 6th Corps are now. If you are not ready are you courting disaster or not? Are you acting unwisely? Are you true to yourselves if you are under thirty? Are you true to your children if you are over sixty? I am not an alarmist; I would any day sooner laugh than cry. I don't like carking care any more than the liveliest youth in my audience—

"With mirth and laughter let old wrinkles come,
And rather let my liver heat with wine
Than my heart cool with mortifying groans."

But are you convinced that this regular army of yours is fit and efficient for its duty? And if it is not, are you going to make it fit for its duty forthwith? For these duties come as a thief in the night. Do not you know that your position in the near East has been very nearly lost? What is the good of talking about sympathy with Turkey? Sympathy!—are the New or Old Turks working on sympathy? Do you mean to tell me that the New Turks would have had the least chance whatever of being Masters in Constantinople now if they had relied on anything in the way of abstract Hague-Conference humanitarianism? How did they succeed? Cheffket Pasha might be the incarnation of wisdom, with all the Ulema behind him, and he would be outside Constantinople to-day, if there had not been ready and well-trained armies with good brains at Salonica and Adrianople. That is how you get on in this world, and not by abstract humanitarianism. They were talking about philosophy and a new kind of elaborate fencing exercise to Uncle Toby in that celebrated book of Tristram Shandy, by Stern. "One good bayonet thrust would be worth the whole of it," said Corporal Trim. One good army corps, well organised and ready, is worth any amount of military jetsam and flotsam. I am quite convinced that our regular

army, in spite of the splendid efforts and self sacrifice of officers and men, is not kept up to the proper standard for a race with our dangers and responsibilities. The last time I spoke in this Institution I followed my lamented friend, Mr. Arnold Foster. You will not object to my paying a tribute to a man with whom I was associated for twenty-five years. He may have had faults, and who has not? But certainly Mr. Arnold Foster most earnestly and devoutly gave all that in him was—to speak alas! in the past tense—to acquiring knowledge which might be useful to the military institutions of his country. He made a speech here about the Special Reserve. Officer after officer got up to speak. I only spoke as an enquirer after truth, but Mr. Arnold Foster spoke as having been a responsible Minister of State. Every speaker declared that the Special Reserve was the very reverse of fit for its purposes. Is that true? If it is true, is it not a perilous thing? What is the Special Reserve for? The Special Reserve is not a reserve to go immediately to the front on the mobilisation of certain battalions. The Special Reserve, I take it, is a body of men who, when the army is called up and mobilised for a foreign war, does not go to the front. That is done by the ordinary Reserve. But when any casualties occur during the war, then the Special Reserve fills up those casualties. But suppose there is no sufficient and efficient Special Reserve at all, how can it fill up the vacancies with efficiency? Then it comes to this: as far as we heard at the last meeting, it was a special, peculiar kind of Reserve that was not fit for any purpose whatever. The officers were not properly trained, the men were improperly equipped. They were poor, wretched fellows, many of them unemployed and many of them serving—for what? Food; not under conscription or obligatory service, as do crowds of well-educated men in Germany. They were not conscripts under such conditions. These poor men of the Special Reserve, noted and marked for death, mark you, because they were to go to the front when the war had become so serious that it was absolutely necessary to get some creatures to fill up the depleted ranks, decimated by bullets and shells. These poor men, these unemployed, were—what? Boys, the flotsam and jetsam of the decaying British humanity. They are the miserable products of our deadly dull slums in Kensington and Westminster, of the permanent homes of poverty or worse in Whitechapel, and Glasgow, of Tabard Road, and similar miles of the herded desecration of our race. Their parents live in such blighting misery that the police told me a few Saturday nights ago that if they lived in such homes they “would be drunk every night of their lives.” A large number of the Special Reserves, then, have been enlisted, not because of elevation or dignity, as Mr. Arnold Foster, almost in his dying words, proclaimed here, but because they were the creatures of misery and poverty and shame. Is that a proper state of things for a nation like this?

Is there any honour in that? Does not your soul shrink within you as you contemplate such a thing?

Then what about the officer? Only to-day I heard from a young officer of the deplorable way in which he is treated. It is a great compliment for a man to volunteer to be an officer at all in our army; he gets little pay, little thanks, and has no legal rights and no status. A man who goes as an officer under such conditions is a highly estimable citizen. The officers are not properly instructed, indeed, it is officially reported that they are among the worst educated men of their rank in Europe or America. A non-instructed officer is, under modern conditions of life, nearly as little use in war as a weak or infirm soldier. He is a danger to himself and to the race. Is that Special Reserve, then, an institution by which a nation of forty millions, of whom a large number are rich and prosperous, governing 360,000,000 of the human race, with the whole future of humanity depending upon it, can be proud? Are you proud of your Special Reserve? or will you change it and make it worthy of yourselves, worthy of your women, and make it so that young girls can walk along with its soldiers and be proud of them? For unless you have young girls who are proud of the men, the men are certainly not fit to be proud of themselves.

Now we will come to another point—the Territorial Army. Many of us here are members of the Territorial army, and I am not going to say one word against it. On the contrary, as we may have no other home forces available, it would be madness to drop recruiting for this force, and doing our best to make it a utility instead of a futility. If we had obligatory military service to-morrow, we must have corporals, sergeants, lieutenants and captains, or the thing would be a farce. Supposing there had been no pre-revolutionary soldiers like Soult or Napoleon, and the galaxy of young soldiers before 1792 who became so famous 1793 to 1815, what would have become of the untrained and improvised *levée en masse*? Would the French have won any victories at all even under Napoleon? He had to get men to work with, and these were the men who commenced their careers under the Monarchy. Hence even if we could hope for obligatory military service to-morrow, it is the bounden duty of every one of us to learn all we can of the art of war now, wherever we can get it, so that there may be some people fit to go and take control of the new levies. In point of fact, when Gambetta organised those enormous levies in France with which he proposed to relieve Paris, he failed very largely because the officers and men of the regular army, owing to the nation not being prepared against Germany, were then prisoners in Germany or shut up in garrisons. Had he been able to procure officers and sergeants and cavalry, commissariat and artillery, had he got time he could have cut the lines of communication between Paris and Strasburg, and France might have "been the grave of Germany." You cannot improvise cavalry, you cannot

improvise artillery, you cannot improvise commissariat. The soldiers of Chanzy and Faidherbe and Bourbaki starved and perished in their own country, and consequently I say that, as we have a Territorial army, we ought to do everything we can to learn all we can through it, and to support it. I was glad to see in the papers recently a letter from one of Mr. Haldane's political opponents, Mr. George Wyndham, setting forth this advice very clearly.

It is admitted on all hands now that there may be an invasion. You see that the Blue Water School is as dead as the dodo, or as any other kind of aquatic foolish bird. A circular issued by the Army Council insists that the object of the Territorial army is to resist invasion. They contend that we may have an invasion, and they say that the invasion may occur when the regular army is abroad; and certainly I would advise invaders to adopt that suggestion. The less efficient soldiers there are at any moment, then, the invader should come; at least, if I were an invader, I would not try to force myself into a man's house when "the strong man armed" was within. There may be an invasion of our "tight little, right little island," and we are told officially that the Territorial army must protect us. This theory has been taught in this Hall and elsewhere for years, but all in vain. The Fleet may not be able to stop an invasion; in fact, our fleet may conceivably be inferior, at a given moment, to another fleet. It was almost high treason for us to say that a few years ago, but it is highly orthodox for us to say so now. You will not turn me out for saying it now, but anyone was in danger of being turned out when he said so a few years ago. The War Office now declares that in spite of all our naval power there may be an invasion; and who are to protect you but the Territorial army?

Now, I would put it to you, is the Territorial army in a state of efficiency for the purpose? Is its recruitment liberal and large enough? You have obtained recruits by all kinds of methods, I admit. They have been coaxed, wheedled and coerced, cherished, lavishly rewarded, cajoled. If we had been coaxed, when I joined the Volunteers, half as much, we should have been very proud of ourselves. We were kicked. I don't blame you at all in the least, but is the Territorial force sufficient? Would it have saved England from invasion in 1803? Had you not twice as large a force in 1803 out of ten million English as you have now out of thirty million English? If you required such an enormous force in 1803, when you had absolute and undisputed command of the sea, as was proved at Trafalgar, 1805, who will stand up here and tell me that this Territorial force can possibly be sufficient for its purposes in 1909 unless it is enlarged and strengthened in every way? I say all this without in the least speaking with any disrespect to any individual member of the Territorial force. Consequently, I hope that I have proved very shortly that there certainly

is a lack of readiness in many respects, and that it is the duty of everyone here to pause and consider and reflect how he, in his own individual capacity, can bring such pressure to bear upon the Government that as soon as possible we may be as well prepared for contingencies—far more terrible now than they would have been in 1803—at least as well prepared as our ancestors were at that date.

Now, Sir, am I demanding anything enormous? Why should not forty millions of people be as well prepared as were ten millions of people?

Why should we not be as well prepared as Germany in every way, and fully as well prepared as we were against Napoleon. Why are not forty-three millions of people as well prepared as were eighteen millions of people? Why should not people whose total capital is £15,000,000,000 be as well prepared as people whose total capital was £4,000,000,000? Why, I don't see. We are dwellers by the banks of the Thames or Clyde or Shannon! Is there anything in the nature of us, in the appearance of us, in the hereditary instincts of us, in the historical traditions of us, that would lead us to teach our children that, male or female, they are destined to be and ought to be in any respect inferior to the dweller on the banks of the Rhine or the Elbe or the Oder? I would like some traveller in antique cities, or in modern factory towns even, to tell me is there any reason in the nature of things that if the Germans have become so very great and powerful as to be leaders in sociology and in science, leaders in the study of history, even of English history, only second in commerce to ourselves, leaders in war, with that enormous army spread out on that map of Germany, and leaders in industry and able also to make a bid for naval supremacy, why the United Kingdom should not be equal in every way? Preparation for the attainment of greatness is the next best thing to being great. For Germany to have managed in thirty years, from being one of the least of the commercial and maritime powers, to be able to beat, in regard to commerce, France and Russia and Italy put together is a most startling success. But why are we relatively inferior now? The cause must be in something evil in our institutes and habits created by man; there is nothing singularly bad in us as created by God. The Celtic race is not an ignoble race, although, I am sorry to say, it has been largely exploited and destroyed. Surely the magnificent Saxon race is not an ignoble race. Surely there is nothing the German can do that a Saxon cannot do. Surely a Highlander from Scotland is as good a man as a Highlander from Saxony, although the latter does not wear a kilt. What is there in the nature of things to cause us to be degenerate absolutely and relatively compared with our folk 1804-1809? I hope in another lecture that some wise speakers will come forward and prove that many reasons exist why, within ten years, there

should not be a half-starved child in the whole miserable factory system, and that every child and every father should be in every respect as well treated as persons of the same rank are in Germany, and every mother should have a chance of rearing her children as God and Nature intended children to be reared; why every man should be impregnated with a noble zeal to help his sisters and his daughters and to help his country and to secure the greatness of his Empire. There is no reason, except in ourselves. Sun, the Chinaman, wrote: "The decay of a nation is in the nation," and I assure you that if I read out to you, had I the time, the state of education among the richer classes, the miserable and degrading reports about the fashion in which young men are prepared for the army—the very soul of our nation—the despicable way in which the young students are treated in the public schools, there is not a man here who is a father that would not join in league at once to mend these things.

You must elevate yourselves. You must be true to yourselves. You must secure the elevation of the bodies of the poor; you must secure the development of the brains of the rich, and then you can laugh at any or every threat of attitude from any greater—you can worship the goddess Britannia without any fear of making her ashamed.

Let us now look at the history of a hundred years ago. Just look at what England did between the years 1793 and 1815. Why, Sir, with the exception of Canada and a very small part of India, she started all the Empire on the map. She spent £1,000,000,000 of money against the French Revolution and the Empire; she sent expeditions to every part of the earth, and conquered on every sea from the Potomac to the Irrawaddy.

Look at the map of America:—Think of our numerous expeditions to the various West Indian Isles, and in South America, and our attack on Washington itself.

Look at the Map of Africa:—Capture of the Cape of Good Hope (twice); expeditions to Egypt (twice); Mauritius taken.

See the map of Asia:—Tippoo Sahib ruined; Ceylon taken; Mahratta Wars—Delhi taken; Goorkha War—Java taken.

Return to Europe:—Think of our many expeditions to Copenhagen, to Italy and Belgium and Holland, and the coasts of France. Why we even fought the Turks in that period! I am glad to say that the Turks have not forgotten their ancient manhood yet. When I was at Salonica about twelve years ago and saw the armies of the Turks marching through that town after smashing up Greece; when talking to the officers and looking at these magnificent men from Albania and Macedonia and Asia Minor, I said, "Whatever there may be in Islam, whether it be true or false, we need not be surprised that your ancestors, a few hundred years ago, were able to march through the desert parts of Central Asia, all through Asia Minor, and take Constantinople." How different the scene enacted at the

Crystal Palace a short time ago, where miserable fools of poor folk, without even girls to cheer them, were calculating the chances of football kickers or some other buffoons, just as the Greeks were betting on green and blue charioteers when the Turks were preparing to storm Constantinople. I was not a bit surprised when I saw the Greeks beside the Turks in 1898. Manhood is, after all, something, whether a man be Japanese or Turkish or English. A mere "sporting" spectator at horse races or football or cricket, why he is no man; he is not even fit to make love to a pretty girl. A man who rides horses is quite a different creature.

Well, Sir, I was just about to go on to deal with the exploits of the British between 1800 and 1815. The English were everywhere at that time. They marched from Torres Vedras to the Pyrenees. There is a magnificent song about it. It should be printed and sung at every festival in your land:—

"They drove the Frenchmen all before them
As foam is driven before the stormy breeze;
Then they marched on, their conquering banner o'er them,
From Torres Vedras to the Pyrenees."

Is not that something to remember?

But a change came o'er the spirit of their dream. In the Peace between 1815 and 1853 a terrible change took place. Mankind became, in the factories under the new commercial system, not the assets of the State, but the adjuncts of a machine. Nothing could awaken our rich people from their dream that opulence was everything, that manhood was nothing. Poor little children, as Dickens describes, and of whom Lord Shaftesbury was the champion, were brought out from the cradle to tend machines or furnaces; women were grovelling on the ground in mines, drawing after them waggons. Humanity was potted; no prevision, no generosity, nothing good. Our land became one sink of level avarice and its victims. The Duke of Wellington, whose speech I have here before me, pointed out in 1849 clearly, "If you don't look out, war may come; I see the cloud in the East already—war may come—are you ready?" He was laughed to scorn; I suppose you know this as well as I do? I am only bringing up to the minds of my audience the lessons of the past to confirm the precepts of the present.

What took place during the Crimean War?

Horrible disaster, disgraceful neglect of the sick, starvation and misery, fruitless exertions of sacrificing heroes—why? Because political and commercial speculators would not take the Genius of war by its forelock in time. 4,000 fell by the sword—and 20,000 died through mistakes of the Government. But what had you before that War? You had the Universal Exhibition in Hyde Park. There were speeches made then, and I assure you, when I read them again a few months ago,

I could scarcely keep my temper. Commerce was going to rule; there would be no more wars! But there was war in 1854, and war in Italy in 1859.

There was a terrible and appalling war in the United States of America 1861-65. The Americans had neglected their army, saying, "We are not Europeans, we are not going to fight anyone; we are wise men of peace; and we have no militarism here." They were not fools enough to waste money and life in battles." And yet, because of four million negroes, men and women, they did fight. They fought to the death. Do you see that map? Do you see the letters "W" and "R." Washington and Richmond, 100 miles between them. That is not very far, is it? Yet, in five months of one year 100,000 men fell dead there. Whole territories from Chattanooga to Savannah and up to Charleston were destroyed, £1,000,000,000 of our money was spent by one side only on one of the wars which were never to have occurred any more, according to the orators of the International Exhibition of Hyde Park; and sophists here are still talking equal nonsense. Why this waste? Because warnings were not taken, and a sufficient and efficient army was not ready to put down the rising. Immediately after this war was over, down went Austria in seven weeks—before whom? Before North Germany. How? Because the brains of the German army were superior, and because the organisation of the German army was superior, and because everything was ready—not because the Austrians were cowards. I see a gentleman in the corner who knows Hungary better than I do. Perhaps he might say a word as to whether Hungarian cavalry are cowards. Are Austrians even now cowards? Austria has recuperated. It had a sufficient army and sufficient German support to be able to scoff at our feeble diplomacy during the past year.

Yet in 1866 war broke out on June 14th. Three different German armies, converged from Breslau, Berlin and Dresden on to the Bohemian frontier by June 25th; all the passes and several river obstacles were traversed by June 29th; and the North Germans fought and won a tremendous battle—one of the most decisive in history, by July 3rd, at Sadowa or Königgrätz. Austria's position as head of the Germanic Confederacy was lost. Why? Because readiness meant victory on one side, and unreadiness meant ruin on the other.

What happened in the next great war? France, early in 1870, was the military power of Europe *par excellence*. It had the traditions of the Grand Monarch and of Napoleon. Its military history and literature were magnificent, and its scientific aptitudes and *élan* and courage left nothing to be desired. The army was of the highest repute, and supposed to be fit to invade and ruin Germany forthwith. But it was soon obvious that in organisation, mobilisation, commissariat, guns, numbers of trained men, France was far inferior to Germany. Nor was it a nation in arms to anything like the same perfection of

standard. Nevertheless, Lord Granville, our absurd Foreign Secretary, emitted oracles that were baseless only a few days before the war; according to our Official Dryasdusts, who are lavishly paid for promulgating error, not a cloud of war darkened the European sky. Our wiseacres had declared in 1866 that Austria must win, and it was said by able correspondents after the battles of Fredericksburg and Chancellorsville in 1862-3 that they had witnessed the fall of the United States. Yet the United States are now stronger by far than ever. Austria lost in 1866, and the Federals won ultimately in 1865. In spite of all the ineptitude of Granville, and the self-confidence of Lebœuf and the Emperor Napoleon III, Germany was not invaded. On the contrary, on August 4th three German armies were conveyed by nine railways to the frontier with mechanical accuracy, with 500,000 infantry, 50,000 cavalry, and 1,500 guns. I need not detail the victories of August 4th, 6th, 14th, 16th and 18th, and the surrender of MacMahon at Sedan, September 1st, and the investments of Strasburg, Metz and Paris.

Various efforts were made by 600,000 unprovisioned and improvised, untrained men, led by unskilled officers for the most part, who, as has been said over and over again in this room, never yet defeated an organised army. Don't rely upon the nonsense about the people springing up like dragons' teeth and biting the invader. If they spring up at all, they bite the politicians.

They destroyed the politicians by a Revolution, September 4th, and they burned the capital with fury after the war was over. Such was the ruin and disorder due to fools rushing into war without being ready, or counting the costs; and the Germans brought home an indemnity of £260,000,000, and kept Metz and Strasburg. Would it not have been better for the French to have listened to the advice which had been given to them only a few months before the war by the experts who were turned into derision in the Chamber of Deputies in Paris—to have spent £60,000,000 of money and a little attention and care and time, and then they would have kept the Germans eight months getting to Paris, if ever they got there at all? If there is any gentleman who disbelieves this theory, I wish he would say so in the discussion.

Here is Von Moltke's summary which every speaker on the necessity of national preparation for war should have on the tip of his tongue:

"Thus a war, carried on with such a vast expenditure of force on both sides, was brought to an end by incessant and restless energy, in the short space of seven months.

"Even in the first four weeks eight battles were fought, under which the French Empire crumbled, and the French army was swept from the field. Fresh forces, numerous, but incompetent, equalised the original numerical superiority of

the Germans, and twelve more battles needed to be fought to safeguard the decisive siege of the enemy's capital.

"Twenty fortified places were taken, and not a single day passed on which there was not fighting somewhere, on a larger or smaller scale.

"The war cost the Germans heavy sacrifice; they lost 624 officers, 123,453 men, 1 colour, 6 guns.

"The total losses of the French were incalculable; in prisoners only they amounted to:—

In Germany ...	11,860	Officers ...	371,981	Men
In Paris ...	7,456	" ...	241,686	"
Disarmed in Switzerland	2,192	" ...	88,381	"
	21,508	" ...	702,048	"

"There were captured 107 colours and eagles, 1,915 field guns, 5,526 fortress guns.

"Strasburg and Metz, which had been alienated from the Fatherland in a time of weakness, were recovered, and the German Empire had risen anew."

Verily a striking contrast between the results of Readiness and of Fiddling! I need not give details of the miserable inefficiency of our own authorities in 1899. I need not refer to ancient as well as modern Empires. Look at the Mediterranean: "Thy shores were empires, changed in all save thee." Assyria, Greece, Rome, Carthage, where are they? "Thy waters washed them power when they were free and many a tyrant since."

A few years ago in this room, before the South African War, I listened to Councillor Bloch for an hour-and-a-half, and so did the chairman. It was a wonderful dreamy lecture, and a preliminary to more dreary foolery at the Hague, and he taught us with the utmost confidence that new weapons had made war impossible and that cavalry was useless, and bayonet attacks were perfectly inconceivable again. Several other gentlemen experts and prophets about the same time told us that we could never be engaged in war again which would require a greater force than we used in Egypt, 1882—an expeditionary force of about 40,000 to 60,000 men at most, and 10,000 cavalry. The *most*, mind you! They told us this in 1899, I assure you, and were applauded; I laughed at them and was reproved.

Now, when were ever such entrenchments in the whole history of the world as since 1899? Far more formidable than the ancient Roman entrenchments or the American entrenchments—as some of you have seen for yourselves. What about the Boer entrenchments at Paardeburg? And yet battles were won. I venture to say that you will not beat them by anything done by the Romans except, perhaps, the German great lines of Antoninus. Now we come to Manchuria. I wish you could see the pictures which were given me very kindly by the Japanese officers. If I could bring them here you would be

perfectly amazed how any human being could have ever got across the Liao Yang and other entrenchments. And what occurred? Terrible battles and successful battles in spite of all the weapons and all the monstrous engineering feats. We were never to have a war again that would require more than 40,000 troops! But within two years, between Regulars, Militia, Volunteers and Colonials, more than 300,000 troops went to South Africa, and instead of 10,000 horses, you used up 400,000 horses and mules. Will you listen again to quacks like Granville and de Bloch after these dolesome experiences? Lest perchance led by political knavery you might have already forgotten and begun to revel in visions of a new millenium, came the Russo-Japanese war.

Fortunately we have Kuropatkin's work, and many other able French and German treatises for our guidance and to explain the quite unexpected collapse of the Colossus of the North at whose naval and military feet of clay both Germans and British had cowered—smashed to pieces they were forthwith by Japan. Why? Let Kuropatkin tell, he ought to know, and he groups the causes of defeat under three headings. Russia was unprepared. In the first group we find results of the defective national preparation for war and of the national circumstances of the period.

The sections of this group are:—

- a. The absence of previous diplomatic arrangements such as those which enabled the Germans in 1870 to employ without delay their entire forces against France.
- b. The faulty use of the fleet throughout the war.
- c. The inferiority of the railway communications.
- d. The internal disorders in Russia, which affected the spirit of the army.

For the first three of these defects, it may be noted, General Kuropatkin appears liable to at least some share of the blame, while as regards the fourth, he shows that the better spirit which animated his army at the end of the war was due partly to himself and partly to some of the very measures of which he elsewhere complains.

The second group comprises:—

- a. The delay in mobilising the reinforcements.
- b. The transfer to the reserve during the war of efficient soldiers who were still liable for colour service, while untrained elderly reservists were being sent to the front.

Let us now think of ourselves! Though you are far behind the requirements of your lofty destiny, there is time for recuperation. Though much is lost, all is not lost. Give up undue devotion to games and sports, worship intelligence and honour and self-sacrifice—gird your loins for the coming crisis. Pessimism is as unbecoming a true man as is effeminacy

or looking at football. Stand in the old paths, see what are true paths and straight paths and walk therein.

There is no other remedy for individual or for national decay, but the true cult of the soul (*anima*) which is the body's guest, and of the body which is the host of the soul. Humanity in its essence changes never, age after age the same. Armies require plenty of men, plenty of food, plenty of ammunition and armaments for destruction and concentration of force by highly-cultivated brains. The principles of war are the same, whether Alexander or Cæsar or the Swede or Napoleon or Moltke or Roberts be the leader, the *anax-andron*, the king of men.

The British race has boundless resources. As I look at you, ladies and gentlemen, I revive the memories of the *Færie Queene*, in which the poet Spenser in the glorious day of Great Elizabeth, set forth in immortal imagery and with all the glamour of chivalry and romance, how to form the men and women of his race in all "godly discipline." I see before us once again his glorious heroine Britomart, and her splendid environment of brave knights and lovely dames. But, still more entrancing vision, behold Britannia herself again rising from her Imperial Ocean, shaking her dewy locks, trimming her invincible tresses, and once more about to kindle her undazzled gaze at the full radiance of the noontide sun. We are willing to follow Britannia—*ubique per mare et terras*.

Wherever Britannia leads, where glory and duty guide, we follow the brilliancy of her spear o'er land and wave.

Major W. G. CARLTON HALL, 19th (County of London) Battalion, The London Regiment (St. Pancras):—I should like just to say a few words, although I am not a person of any authority, such as Dr. Miller Maguire, who has spoken about the organisation of men and horses. There are one or two things which have often occurred to me as to the reason why a voluntarily enlisted force cannot, however much *esprit de corps* there may be amongst the members, ever be equal to a conscript force. One of the reasons is this: If a man joins a force like our Territorials he does not do it—although his object may be mainly patriotism—wholly from patriotism; but he wants to get something back. You can't blame the man. Practically the only thing he can get back is a little instruction in something he does not know much about; hence, you find the mounted branch of the Territorial Force is composed mainly of City clerks. They are men who never in private life have a chance of learning to ride, and think that joining the Force will be a good opportunity. I don't think that anyone will believe that a man who rides on an average for one fortnight during the year is likely to be such an efficient horseman as to be of much use in the field. They have the greatest enthusiasm. I do not profess myself to be a cavalry expert, as I have never had anything to do with mounted work; but I think I know a man who can ride when I see one. When one compares English yeomanry with the cavalry of Switzerland—a country which is not by nature given to horsemanship—one cannot but see that the fact that the men have to serve in some form or other, results in an extraordinary improvement in the cavalry, that is, so far as the men are concerned. The cavalry being raised compulsorily, and

the main being enlisted for ten years, it is possible for the Government to supply him with a horse on a business-like footing, which enables him to keep that horse himself. The result is, that the Swiss cavalry are splendidly mounted; whereas the horses of such Yeomanry as I have seen are a positive disgrace, to say nothing of the fact that I believe if the whole of the Yeomanry were called up for training at one time, they would have to go four men on one horse. When one remembers that the splendidly mounted Swiss cavalry is mounted almost entirely on Irish-bred horses, and when one goes to Dublin in the Horse Show week and sees the town full of Italian officers buying horses for the Italian cavalry, one despairs of ever seeing anything in the way of a decently mounted cavalry in this country, which says it cannot get horses, and yet supplies cavalry to at least two other nations.

Mr. F. HUGH O'DONNELL, ex-M.P. :—I do not presume to come before this important meeting, which has so many claims to be considered the brains of the Army, as one knowing the *métier*; but it has occurred to me that there are some things which have come before my experience in the course of my special work which might be of use if laid before the keen minds which I have the honour to address. I have now been for nearly forty years a student and writer on foreign politics. As far back as 3rd June, 1876, I wrote the first article which appeared in England on the Bulgarian Insurrection. That was in the *Spectator*. I have also had the honour to write several articles on the Turkish Revolution in other reviews during the past six months. I have for a long time been a resident in foreign countries, engaged in the study of their local circumstances with a view to my particular profession. I have also been active in important organisations concerned with the electoral action of the masses in this country. We have not to deal with politics, but I have only to point out that a man who has been President of a popular organisation with 360 branches between Dundee and Bristol has had certain opportunities of studying the public mind of the masses of this country. Now, from all these points of view I wish to say a few words to this important meeting. As a student of foreign affairs, one who has devoted a trained and scientific attention to the circumstances of foreign countries, I wish to bear my emphatic testimony to the importance of universal military service from the point of view of the general well-being of the civil population. I could quote not one, but hundreds of testimonies, from University Rectors to factory owners, from Budapest to Cologne and Amsterdam—those who had universal service in their own country, and those who regretted that they had it not—and all these testimonies were unanimous upon the excellent results of taking hold of the young men of the country at what I may call the hobble-de-hoy age, when they were still mouldable and shapeable, and of imbuing them with habits of discipline and order and with the instincts of co-operation, plus the manly sense of being masters of their minds and muscles in the defence of their fatherland. Such a lesson given to these young lads—lumbering louts from the plough, lads who would be stunted artizans without a noble reminiscence if they lived in some of those factory towns referred to by Dr. Maguire in his magnificent address—would be of incalculable benefit, and mark them out as something superior to the corresponding men of nations in which no such noble service exists. And passing from that matter allow me to add one solitary warning from my experience of forty years of foreign politics, and that is to say that I am convinced that at no time in all the chequered annals of our mighty history was mighty danger so nearly

impending to all you hold most dear as it is impending at this moment. I believe that in our Chairman we have an expert in the military affairs of the Balkan Peninsula. All that I know upon this and related subjects goes to confirm the view that within a few years, it may be within a few months, if you are not prepared to embark upon your ships greater armies than went with Wellington to the Peninsula, a sore strait and a dangerous strain will be put upon the British Empire beyond the seas. Furthermore, speaking as one who presumes to know something about the masses of this country—for the opinion of the masses are of more importance than mine—I would ask this highly-trained auditory to consider the question of military service from the point of view of the plain English common man in this democratic age. If you are to have an enthusiasm for universal military service that will keep in its strong grasp the hearts of the whole people, then you must have within your army larger openings and opportunities for the rise of simple merit than at present exist. I might say for myself that where we can get it, I am quite a believer in an aristocratic corps of officers; but you cannot get a universal Service Army in contemporary England on the basis of being governed by a purely aristocratic corps of officers. You must take account of that instinct which was appealed to in the days of the French Revolution, when the plainest French soldier was taught to believe that he might have a *baton de maréchal* in his knapsack. You must open the doors of the officer body to vastly larger contingents from the lower ranks. Again, there is a deep and a profound feeling throughout the masses of this country that Government and society do not place at the disposal of the existing officer body those opportunities and those obligations of scientific military education which are demanded in order to make the officer body a safe guide and trustee of the nation committed to its care and leadership amidst all the emergencies of the battlefield and the campaign. It is the conviction of the masses of this country that the educational system, which is at the disposal of the classes, willing to supply officers, is an educational system that is unworthy of your officer body and unworthy of the duties and the responsibilities which impend upon every soldier in an Empire like this. I cannot, upon this occasion, discuss or expound at any length these views; but I would ask you to believe this: that a large portion of the luke-warmness, and the indifference, and the anti-militaryism—there is no anti-militaryism in John Bull; give him his chance and he is a fighting animal—that the spurious anti-militaryism which rages throughout this country, is largely based upon the popular dissatisfaction with the manner in which the officer body is recruited and the manner in which the officer body is trained. In other countries, the bluest blood—take Germany, for example—does not dispense with the most scientific training. Even if your officer body desired to reach a scientific training equal to the German standard, it has not at its command the educational institutions which are demanded by such a necessity; and what is more, such is the blindness and stupidity with which even the existing opportunities are treated by the powers that be, that instead of encouraging the men and the Institutions who desire to put their whole heart into the work of military education, every kind of cold water is thrown upon the efforts of the most zealous of those teachers. Now all this has filtered down, long since, to the masses, and men out of the Army, rankers, and non-commissioned officers, have spread the story that there is too little difference made by the Government of this country between the scientific officer, who is endeavouring to make the Army the sword and buckler of the nation, and the mere sporting officer—a fine

gallant fellow—who is very glad when he can pull off his uniform and put himself into the various garbs that are sacred to the prosecution of open-air amusements in this country. Until it is infinitely more worth the while of the British officer to be a great scientific officer than a great Polo player or a great Bridge player, you will fail to win the enthusiasm of the manhood of the common people for universal military service.

Mr. GEORGE LEYCESTER BORRADAILE :—It is with considerable diffidence that I rise to speak at all; but I was detailed by the Association to which I belong to take the place of someone very much better qualified to speak than myself during this discussion on the subject of the readiness of the Navy. I represent the Imperial Maritime League—a body which has devoted itself for the last year to endeavouring to rouse the people of this country to some sense of impending danger, with not a remarkable amount of success until within the last few weeks, when the question has become a burning one. Dr. Maguire carries us a great way by his statements and his history of the subject, and then he leaves us to draw our own conclusions. Of course, he had not the scope for going carefully into details as he went along, and that portion of his address which he devoted to the Navy was not sufficiently prolonged to enable him to drag in all the points. Now, one cardinal feature that differentiates this question of our defence at sea, or our supremacy at sea—I will not call it supremacy, because that, I think, is opposed in some measure—but the defence of these islands at sea, is that we live on sea-borne food and we carry on our industries by sea-borne material. Now, from the point of view of war, the defence of such a place as these islands, under modern conditions, has never been admitted. No war in the past gives us the smallest idea of what would happen under modern conditions in any war in the future. It has been laid down by Captain Mahan, of the United States Navy, that no mere commerce-destroying war in the past has succeeded, but has been more or less worrying; that is to say, that while a great deal of our commerce was being destroyed, we were still gaining in power at sea. But when you look into the details of what happened at the determination of one war—the war with the French, which ended in 1783—you find this: that though in the last year of the war, after a succession of defeats, the French had absolutely no fleet in being outside their harbours, I believe I am correct in saying not one solitary battleship, and our command was absolutely undisputed, no less than 842 of our merchant ships were captured by the French. That, I think, must give us pause. You must recollect that nine-tenths of our food at that date was grown here, both in meat and in corn. We have an exact reversal of the position now. Four-fifths of our food has to be brought to us. Now, in a period of profound peace, we have seen, in the last few weeks, the loaf rise somewhere in the neighbourhood of 8d. It was owing to speculation based on a shortage of the wheat crop. In the Crimean War, I believe the loaf was up to 1s. 3d. Now is there any plan anywhere—is there any department charged with the formation of a plan, which can ensure our food supply reaching us in sufficient quantities to prevent a revolution here and “stop the war” cry? Is there any department charged with such a plan, and being charged with that plan, does it not inevitably involve a very far higher margin over any other Power than we have at present? If you go, as I have, electioneering, and try and get at the minds of the people, you will find that in the heat of party cry—they absolutely decline to think, they simply have the emotions of a crowd—anything that is said by a Conservative is looked

upon as being untrue by the Liberals, and everything said by a Liberal is derided and hooted by the Conservatives. This question is not a party question at all—it is a national question. You have to decide on the facts, apart from any question of party bias, as they present themselves to you, and it is your duty—it is the duty of the people of this country—to make themselves acquainted with the facts, disabusing their minds of all party bias. The alarm in this country is not panic—that is ridiculous. It is not panic at all. But is it not perfectly foolish of us to allow ourselves to be shouted down and accused of panic-mongering, and that sort of thing, when we demand what really is merely an essential margin of safety? Writers of every nation in the world—unprejudiced writers, I think you will admit—have said that the British Empire throughout its history has been the greatest instrument for good that the world has ever seen. We entered without any labour on our own part, into the fruits of the labour of those gentlemen who strenuously kept—at enormous personal cost—a hundred years ago, our flag flying and the cause of freedom on high. We enter into the fruits of their labours and we have to pass on unimpaired the heritage that has come to us. Are we, in the first place, equipping ourselves with a knowledge of the subject, first of all, to be able to argue the case fairly and equally with people who, at the present moment, disagree with us, largely from ignorance? Are we approaching the subject in the spirit of self-sacrifice? Or are we simply saying: "Ships cost money and we have got enough, and, at any rate, it will be very unpleasant to have to pay for any more"? Do we realise, in the very smallest degree, our obligations all over the world? Do we realise that, in the last month or two—certainly in the last three months—the most solemn treaty that was ever entered into by European Powers was torn up? That, again, shows the fact that might is right. Russia backed down in face of Germany because Russia could not fight. If we are given the choice some day soon between backing down in face of power because we are afraid of sticking up for something right, what shall we do? No doubt, our impulse would be to fight. No doubt it was the impulse of the Russian Government to fight; but better counsels prevailed. Then, but truly for the first time, the Union Jack will be trailed in the mud. It is for you now, it is for this audience—I do not mind saying it is for every man who has a headpiece on him at all, it is for every woman who has any love for her country at all—to make himself and herself masters of the subject and insist, whatever the needs of our poor people may be, whatever wrongs we feel ought to be righted in the body politic, that, first and foremost, no Government, of whatever complexion, shall allow this question of the Navy to be ever put into the background, but that it must be in the front; and these people, knowing its responsibilities and knowing its necessities, will insist that this great subject shall be properly dealt with, and dealt with purely and simply from the patriotic point of view.

Commander W. F. CABORNE, C.B., R.N.R.:—Dr. Miller Maguire has done me the honour of asking me to say a few words in this discussion, and it is with sincere pleasure that I do so, particularly after the admirable address, so full of great truths and so replete with genuine patriotism, to which we have just listened. It is absolutely certain that for the adequate defence of the Empire we require an overwhelmingly powerful and efficient Navy and a large and efficient Army, and that we cannot afford in any way to lean upon the broken reed of paper agreements and treaties, no matter how deliberately they may have been

entered into and how binding they may appear to be. Only a short time ago a prominent Little Englander wrote a letter to *The Times*, in which he said that, as a commercial man, he should infinitely prefer the protection of recognised International Law to the protection afforded us by our Navy. By the courtesy of the editor, I was permitted to reply to that letter, and in pointing out the fallacy of the views expressed, I alluded to the recently torn-up Treaty of Berlin, mentioned by the last speaker, as an instance of the valuelessness of solemn international agreements. While upon this point, it will be within your recollection, Sir Thomas, that upon the occasion of a lecture in this Institution on "The Hague Conference and Naval War," in February of last year, four of us spoke in the debate, namely, yourself, Lord Ellenborough, the Marquis of Graham, and myself. We were, I think, in perfect agreement, not that International Law was a bad thing in itself, but rather that it was useless unless it could be backed up by necessary force. It was apparent to all of us that no law, however desirable and beneficent it may be, is effective unless it can be duly enforced, and the question naturally arose as to who would enforce so-called International Law. Well, we had the distinction, I may say the honour, of being subsequently held up to public opprobrium in a sixpenny monthly publication for the opinions we had expressed. We were told that we had the ethics of pirates, that we were ill-informed savages, and that it was to be hoped that we would be hanged from the yard-arm, and the sooner the better. However, notwithstanding this drastic condemnation, we still survive, and I trust we shall do so for some considerable time to come. The lecturer has spoken about the death of the Blue Water School, and by the term I understand him to mean the extreme section of that school. Now, personally, I was never a believer in the doctrine of the extremists, and failed to appreciate the view put forward by a very distinguished Statesman in the House of Commons on 11th May, 1905, that invasion of these islands was impossible, even with our Army abroad and our main fleets absent, owing to the ubiquity of the naval forces that would remain. This theory was afterwards so much embroidered upon that it was asserted that not even a dinghy's crew could land without being discovered. The speech just cited was described by some of the newspapers as an epoch-making one; but, for my own part, I was under the impression that it was epoch-making in the wrong direction, and I think that the ideas then advanced are not very largely held to-day. My view of the Navy is this (it may be wrong, but it is my view): that it is not its duty to hang about our shores and to patrol our coasts, but rather is to seek out the enemy wherever he may be found, and the nearer his own country the better, and to fight him and beat him, and also to keep open our indispensable food and general trade routes. We also need, as the lecturer has pointed out, a large and efficient Army, not only to defend our outlying possessions and to follow up any blow that may be struck by the fleet, but also to prevent any landing on our shores, and it seems to me that this latter is its special duty and not that of the Navy. The necessity of properly defending the United Kingdom is impossible of exaggeration, for as the heart controls the members of the body, so do these islands control the other dominions and dependencies of the Crown; and if any overwhelming disaster should overtake the United Kingdom, which is its heart, then the British Empire—an empire of a magnitude and importance of which Rome in its palmyest days never dreamt—will go down like a house built of cards. Dr. Miller Maguire has remarked upon the way in which our young men give themselves over to sport,

instead of doing something to qualify themselves to take part in the noblest of all duties, the defence of their country; and as one who lives in the vicinity of the Crystal Palace, I can fully confirm what he has said about the vast concourse of men of various descriptions who frantically rush to see twenty-two young men kick a ball about. It would appear that the time has come when their energies should be directed, even by compulsion, into a better and more patriotic channel. "What has always seemed to me to be the proper policy in regard to the defence of this country is to see that our force is sufficient not only to overcome the smallest number who might in any circumstances be thrown upon our shores, but that there should be so much additional strength as will compel the foreign Power to contemplate sending a larger force than 70,000, and therefore put it out of the question that they should come at all. The way to prevent invasion is to have, within limits, overwhelming force, such as would compel the invader, if he is to come at all—I am going to put it in a Irish way—to come with such force that he will not come." The foregoing admirable sentiments, with which we must all agree, are extracted from *The Times* report of a speech delivered by the late Sir Henry Campbell-Bannerman in the House of Commons on 11th May, 1905.

The CHAIRMAN (Major-General Sir T. Fraser):—It is getting late, and in my judicial capacity I am not in a position to discuss specially what has been said on this occasion. I think, in the first place, that you are very fortunate to have heard the remarks of Mr. Borradaile and Mr. O'Donnell, and Commander Caborne. They spoke from different points of view—all instructive. We have had the benefit, in Mr. O'Donnell's case, of great knowledge of Europe and European affairs. For my own part I can only say we are not now in as good a position as we were, for the defence of our great Empire, which occupies a fifth of the globe; has a population of four hundred or four hundred and fifty millions; and has grown a hundredfold in a hundred years. Our forces on land and sea are not sufficient to secure us entirely against all possible enemies. We have frontiers on land as long as the Equator, 25,000 miles that cannot be defended by the Navy, and where we march with nearly all the great military nations numbering one thousand millions; and we have 75,000 miles of unfrozen coasts, which have to be protected. I may tell you that in 1807, a century ago, the relative strength of our Navy, as compared with that of all other Navies, was about ten times as great as it is at present. The collective wealth of other nations tends more and more to exceed our own; thus, at the present moment, the United States have financial resources with which they can outbuild us at sea whenever they choose. In future it is possible that one of the great central Powers of Europe may have such financial resources, with its great increase of population, to render it very doubtful that we shall be able to maintain anything like the great position at sea that we have done in the past. Under those circumstances, I think it is very important that patriotism on shore should, as far as possible, relieve the Navy from the necessities of doing shore duty instead of defeating their enemies at sea, which has always heretofore been their policy. To do that I think you must follow the example of some States, small and great, and I will mention one. The Roumanian Government, at a cost of about £1,800,000—less than that of a single ironclad—maintains a very highly educated Army, which is trained for two years, and provides, when mobilised, some 550,000 men. That means that a million of men, on the principle of National Service, used

in Europe in every direction and in Japan and elsewhere, could be trained and passed to the reserve at a cost of less than four millions—the cost of a couple of *Dreadnoughts*. I am one of those who think we must have the strongest possible Navy our resources permit, however much it costs us; there are, however, limits to these resources; but I say that the nation on shore will some day have to give their services where money fails, and thereby relieve the Navy for its legitimate work, while securing at home the land defence of the country by an efficient force, which we have not got now, such as the Roumanian Army is at this moment, and at a cost within our means. We may take it for granted that, with an Army alone we should lose our Empire by losing our sea communications; with a Navy alone we should lose it by attacks on the land along those immense frontiers where we are exposed, and where the Navy cannot directly help us. Under those circumstances, with the loss of the Empire and the wealth it secures us, we should not be able to maintain either a Navy or an Army, and must become a mediatised State or a subject one. It is very late, and I will follow the example that I impressed upon the lecturer, and will only, on your behalf and my own, thank him most heartily for the very brilliant and instructive discourse he has given us.

ARTILLERY SUPPORT OF INFANTRY.

By Major E. M. MOLYNEUX, D.S.O., 12th Cavalry
(Inspecting Officer, Imperial Service Troops).

Continued from November JOURNAL, p. 1470, and concluded.

I PROPOSE accordingly to discuss now the methods by which this inter-communication can be ensured.

II.

The practicable means at our disposal for inter-communication are of three kinds:—

1. Word of mouth.
2. Visual signalling.
3. Electric communication.

I.—The actual sending of an orderly with a message is, where considerable distances have to be dealt with, obviously the slowest of the three, and for some purposes quite out of the question; for example, for communicating the results of fire, and correction required, from an observing station to a battery in action, as the guns clearly cannot wait for an orderly to come and go between each shot, and if not incessantly observed and at once corrected, artillery fire is thrown away.

A chain of orderlies between the two points, to pass on messages by shouting to one another, is almost equally unsatisfactory; it is more uncertain, especially if heavy firing is going on all round, or a strong wind blowing, and not much quicker, if the message is of any length. Mounted orderlies cannot be ordinarily used from the firing line of infantry or its immediate vicinity, to depend for communication between guns, and to rely on infantry orderlies is to surrender the immense advantage of rapidity of transmission. It is hardly necessary to demonstrate that for an artillery officer in the firing line to attempt to control or direct the fire of his battery, perhaps a couple of miles away, by such means, would be futile. We may safely, I think, eliminate this method as inadequate to obtaining the fullest results of modern armament under all circumstances, where the distances are at all considerable.

II.—Visual signalling is the next method which I propose to consider. It has done us good service in the past, and is so very useful under some circumstances that its retention is essential. In situations where cable communication would be liable to be cut, there is nothing else which could well take its

place. Throughout the South African War it was found to be indispensable; and, although it is easy enough to show that there are many purposes for which it cannot be compared to telephony, the conviction remains that the best results will be obtained by the use of both. On the Russian side visual signalling never found very much favour, though the value of telephones became more and more recognised as the war went on. The Japanese appear all along to have preferred telephones to any other method of supporting the infantry attack by artillery, both for direct communication between the two arms and for the correction of the fire of the batteries. Examples, however, are to be found of good results having been obtained by them by purely visual methods. The following is taken from an account of the battle of Vafangu. "Another battery, however, of which nothing was distinguishable beyond its momentary flashes, could not be located, and immediately became a source of extreme danger. The projectiles, which burst at a correct elevation, were fired in accordance with instructions signalled by flags worked far away on the neighbouring heights. In a few moments the 4th Russian battery had lost all its officers, and the guns of the other were obliged to cease fire."¹

There are certain drawbacks in the use of visual signalling for the purposes under discussion, which render it imperative that it should be supplemented by electric methods. In India we see signalling under such exceptionally favourable conditions that we are a little apt to lose sight of the fact that signalling cannot give equally good results where such conditions are absent. Bright, clear sunshine, which may be relied on from sunrise to sunset, as a normal condition, in hot and cold seasons alike; atmosphere free from fog, as a general rule—results obtained under these conditions make us wonder why the system is not more highly thought of amongst the military nations of the continent. There are many countries—such, for instance, as England—where heliographic communication could not be depended on with any certainty for an hour at any time of the year, and where, during the less favourable seasons, days suitable for this form of signalling are exceptional; the same remarks apply, though to lesser extent, to flag signalling at any considerable distance. We cannot be certain that we shall not be called upon to campaign under such atmospheric conditions.

At the end of the Tirah campaign, Sir Power Palmer's elaborate scheme, to "round up" the Zakka Khel Afridis and their cattle in their winter grazing grounds, on the Kajurai Plain, near Peshawar, failed completely, owing to the day turning out unexpectedly dull and foggy, which prevented co-operation between the columns owing to total breakdown of signalling communication. The result was, instead of a success, the "regrettable incident," which included the death of Colonel

¹ General de Negrier: "Lessons of the Russo-Japanese War."

Haughton of the 36th Sikhs; even as I write, an expedition is on its way to inflict a punishment on the Zakka Khels, which might never have been necessary but for the failure of signalling in a country which, generally speaking, is as well suited to its use as any in the world. Useful as it undoubtedly is, visual signalling might form a rotten reed to depend upon alone.

Another weak point about signalling is, that it often has to be visible to the enemy, and can be read by him equally well. Those of us who were in South Africa will remember how amusingly this was illustrated in Natal during the siege of Ladysmith, and how the Boers could pick up our messages and mystify us by bogus ones. The sending of messages in secret cypher would entail a loss of time and a complexity which would be most prejudicial to the use of visual signalling for the particular purposes under consideration. For a signaller to stand up in the firing line or its vicinity, to signal back to the guns, might in any future engagement prove to be just as practically impossible as it was on the top of Spion Kop; and the answering signaller by the guns might, if seen—and it might easily happen that he would have to be seen from the front—"give away" the whole situation.

Signallers, again, have to devote their whole time to signalling, to be any real use; to cultivate their facility, they have to be almost lost as soldiers. They cannot be replaced by untrained men; they require a long and careful training. Consequently, in case of numerous casualties amongst them, especially if our army were "expanded" to many times its normal size in a great war, we are liable to be seriously hampered by lack of *personnel*. Good positions for signallers are not always obtainable; numerous trees, with absence of eminences, as so often in the plains of India, may make them almost useless in any particular locality.

All code signalling is necessarily slow, as compared with electricity. Abbreviations help matters somewhat; but for such purposes as may arise in the support of infantry by artillery, minute explanations may at any moment require to be signalled in elucidation of topography; under such circumstances, the slowness of visual signalling will be at once felt.

Finally, when the supreme moment has arrived, and the infantry have fixed bayonets, and are surging into the position, what comparison can there be between visual signalling at, say, a couple of miles, amidst dust and exploding shells, and the simple sentence on the telephone from an artillery officer lying just behind the firing line:—"Range and fuse as before, rapid fire," followed by the instantaneous "Cease fire," as the position is occupied not a hundred yards behind the dust clouds of our shrapnel?

It must be gathered from the above that I do not consider that the use of visual signalling alone will ever satisfactorily solve the problem of the support of infantry by artillery. I do not wish to decry visual signalling, which, under certain circum-

stances, is indispensable. I only wish to point out that for this particular purpose it must be supplemented by electricity—unless we are willing to incur the reproach conveyed in General de Negrier's warning to his own countrymen. I will now proceed to show why electricity is essential.

III.

I do not think it is necessary to discuss electricity in this connection otherwise than in reference to cable telephony. Other conditions being equal, telephony is obviously superior to telegraphy; and in short distances, the lightest possible field telephones give excellent results. Wireless telephony has not yet come, and neither it nor wireless telegraphy are likely to be sufficiently portable for this purpose; nor does it appear probable that the use of the air as a conductor of sound will be feasible under the conditions implied.

The weak point of cable telephony is, of course, the cable and its liability to damage. In practice, however, this disadvantage is less serious than would appear to be the case at first sight. The cables used by the Japanese in Manchuria were the lightest ever used in war, weighing, with insulation, only 7 pounds to the mile. They had a breaking strain of about 120 pounds, and cost only 16 shillings per mile. Similar cables are in use by the Austrian and American cavalries, to be laid out rapidly for tactical purposes, and then, on the conclusion of the action (if any) to be left lying, as not worth the trouble of picking up again.

Infantry are not likely to break the cable, if accustomed to it; for the particular purposes under consideration, it may be assumed that the cable would not be likely to be crossed by any heavy transport, none being likely to intervene between infantry and guns until the conclusion of the action. It is not liable to damage from wheels passing over it, unless caught by the metal rim of the wheel on the edge of a sharp flint; even then, being a three-strand cable, it is rare for all three strands to be cut. However, the safest rule to adopt in reference to telephone cables is to insist, with the utmost rigour, that anyone who, by any accident, breaks a cable should instantly repair it; this can be done in a few seconds (if the cable be laid slack, as it should be) by stripping the insulation from the broken ends of the wire and tying a knot, which can be easily done with the fingers. Such a cable can be laid through streams and wet grass, even if the insulation be frayed, without losing its power of transmitting. The Japanese adopted the method of sending a man along the course of the wire when laid to mark it with tiny coloured paper flags a few inches high, every 10 or 12 paces; these flags being pinned round the cable instead of planted in the ground where laid on growing crops, over bushes, etc. As this cable was no thicker than a fishing line, such a precaution was very useful in

calling attention to the presence of the cable, and "ware wire" was at once passed back from front to rear on approaching it.

We are not bound to depend upon so frail a cable for war, though its cheapness may be a recommendation for practice in peace; there are more expensive cables made which are very much stronger without being excessively heavy. In any case, no matter what the disadvantages of cable telephony may be, we are practically forced to adopt it and to do all we can to neutralise its defects by ingenuity and training; for we cannot compass our ends by any other means, and we dare not fight an enemy provided with such means unless we place ourselves in an equally favourable position. The Russians are exceedingly conservative in all military ideas; and it may be assumed that they are aware of the disadvantages of "swapping horses when crossing a stream." Before the war, they had not thought much about telephony for this purpose; it was one of the many points of their military unpreparedness. Although it had all the disadvantages of a new and unfamiliar method, they found themselves compelled to take it up in earnest after Vafangu.

Victor Bulla's photographs of the later phases of the war, reproduced in the *Sphere* newspaper, show heavy box telephones in use by the Russians.

An account of the use of the telephone in the directing of the Russian artillery fire at Port Arthur will be found in the *Voïennî Sbornik* for March, 1905; it is interesting in the light of what we know of the still more extended use of the same agency by their opponents. Briefly stated, what happened was as follows:—On the 26th of February, 1904, the Japanese bombarded from the long range of ten miles, and from a direction in which they were invulnerable to the Russians, the direct fire of the heavy guns of the latter being masked. They had it all their own way on that occasion. But when they renewed the attack on 9th March, they were completely baffled by an unexpected move of their adversary. The Russians, from an observation station near the Liao-te-shan lighthouse, directed the high-angle fire of the battleships *Retvisan* and *Tsesarevitch* upon them with such accuracy—in spite of the unfamiliarity of the method—that the Japanese were forced to withdraw.

Apart from the liability of the cable to damage, telephony provides us with an almost ideal machinery for our purpose.

It is absolutely instantaneous, whilst even telegraphy has to be spelt out letter by letter. It is perfectly secret; only the staff officer at either end need know. In certain eventualities, this is invaluable. It cannot be read by the enemy, unless he gains access to the cable. No trained operators are required. In the Japanese Army a considerable percentage in every squadron and company are taught how to use telephones; there is no reason why every man should not know how to use the simple little instruments. It attracts no notice when in use; the operator can use it perfectly well when lying down behind a stone or tuft of grass. It is the nearest possible approach to

an actual interview between two men, who can exchange question and answer with the ease and rapidity of ordinary conversation. It is exceedingly light and portable, if we accept the best patterns. The Ericsson instrument, in which the receiver-transmitter pulls out like a telescope, is probably the best military telephone yet invented; the whole thing is carried in a little leather case on the belt or slung over the shoulder, and is little heavier or bulkier than an ordinary field-glass. The lighter of the two patterns of this model weighs $3\frac{1}{2}$ lbs., the heavier $5\frac{1}{2}$ lbs. The batteries are, nevertheless, sufficiently powerful to still maintain perfectly audible conversation, even though 90 per cent. of the electric current leak out from the insulation being defective in an old and badly-damaged cable. They are cheap to buy, costing £3 10s., cheaper still to maintain; new cells, costing about 2s. 6d., being required about every three or four months, if the instruments are in constant use. As in the case of photography, time and experiment have resulted in reduction of weight, cost, and complexity to what appears to be now almost irreducible.

The Japanese found telephony stood the tests of extremes of climate; in their war with Russia they experienced intense heat, Arctic cold, drought, and deluges of rain. The instruments are constructed to withstand war conditions, and will remain in working order after a surprising amount of knocking about; but are not, of course, quite "fool-proof." They give a power of offensive action to concealed artillery, which must form a terrible weapon under favourable conditions.

An artillery officer, his presence utterly unsuspected, may be lying behind a bush in proximity to the enemy, with his instrument held to his mouth and ear. His battery may be a couple of miles away, screened from view and fire; but, provided they got their angle at starting, so as to get roughly on the enemy, the officer with the telephone can correct the fire of his gunners with as much ease as if he were with the battery in person, but able to observe from two miles nearer to the target.

I will assume that the intrinsic excellence of signalling and telephony, and the experiences of the greatest campaign that our generation has seen, have so far impressed us that we have given the necessary instruments in adequate amount to both infantry and artillery, and trained them to their use. On the assumption I will briefly sketch the procedure which would ordinarily be adopted by the artillery to support the infantry, the enemy having been located, and an attack having been determined on.

IV.

The cavalry having cleared the front and made ready for their new sphere of action on the flanks, place themselves in communication with the supreme commander by visual signalling—supplemented, probably, by telephony in the safer vicinity of

the main army. Anything coming from them that can affect the action of either the infantry or artillery materially, to be also immediately communicated to both the latter. The infantry unit commanders, who have been warned that an attack will take place, and of the general position and disposition of the enemy, as far as known, place themselves in direct telephonic communication with the general, to whom they transmit any further information as it comes in from their own scouts or advanced parties. These latter transmit by signalling, telephony, or messengers, as may be found advisable; only what is material being re-transmitted to the general. The artillery commander, as soon as the general has formulated his plan of attack—during the preparation of which he will be close at hand to assist the general, if required, with his technical knowledge—should be the first person to whom the attack orders are communicated. So important is his part in the scheme, so intimately is his action bound up with the success or failure of the whole operation, that it should never occur that the orders should be issued until he has been through the whole plan with the general in person. The disposition of the artillery, and the intentions of the artillery commanders, in relation to the contemplated action of each portion of his command, should be communicated to each infantry commander. To my mind, the communication by the artillery commander of his dispositions and intentions is just as important as the converse process, which is that alone sanctioned by custom in our service. The infantry commander should know not only how many guns were supporting him, and how and where they were disposed, but also what precise line of action was intended for them; if any were being kept back in *position d'attente*, and, if so, in what direction and at what range, and in anticipation of what action on the part of the enemy.

Should it be intended—as we have every reason to anticipate that in future wars it frequently may have to be intended—that the artillery supporting his attack should fire from a concealed position by indirect method, then the proper place for the artillery officer directing this fire by telephone or signalling is with the officer commanding the infantry, who will thus remain through him in the most direct communication with the guns. There can, then, be no uncertainty in his mind whether the guns can give him their most rapid and powerful support at exactly the right moment, or not; he will also have no fears that he may be deprived of artillery at some highly critical moment, owing to the latter changing position in a well-meant endeavour to support him at closer ranges. The artillery officer, with the telephone in his hand, close behind him, would be a guarantee against the misunderstandings that have so often been the cause of the want of adequate artillery support in the past. Concerted action under the direction of one supreme commander, and not disjointed action by the initiative of local commanders being requisite for success, the local infantry commanders

should also be in direct communication, preferably by telephone, with the supreme commander; the artillery commander, at the same spot, being similarly in direct communication with his scattered subordinates, who would keep him informed of all matters affecting not only themselves, but also the enemy, regarding the location and action of his artillery, and the effect of fire on him, whether caused by their own guns or not, as observed from either the vicinity of the firing line and transmitted to the battery by telephone or signalling, or observed directly from the observation station. The agency of electricity enables the commander to keep his finger on the pulse of the fight as nothing else can, as he is able to appreciate the situation for himself at any moment, without the lurking fear that some untoward incident may have occurred since he received his last report.

It may be objected that to carry this out, in the case of large forces, would be to turn the headquarters into a vast telephone exchange, the multiplicity of whose reports would introduce an element of confusion we might be better without. In Germany, moreover, we find a certain school which deprecates further progress in the perfecting of means of inter-communication, on the ground that the initiative of subordinates is cramped by their being too closely in touch with headquarters, instead of their action being unfettered. The contention, though plausible, is not really sound. The argument against any instrument or method, that it is too perfect for the man for whose use it is designed, and that he will therefore misuse it, is seldom tenable. It may be remembered that when the proposal was brought forward for the introduction of breech-loading cannon, General Airey's committee, to which the question had been referred, voted against the innovation, on the ground that so rapid loading a gun would be only a standing temptation to gunners to waste ammunition by a too free use of it. Exactly the same reasons were urged against the magazine rifle, and still more recently against the latest type of quick-firing artillery—all of which, happily for us, have been introduced. In Russia, many years ago, I remember meeting a reservist soldier, returning from his annual training. As we walked along, I questioned him about the sighting of his rifle—which was of the old pattern. He told me that his officers would not let the men use the leaf of the backsight, as being too complex for them to understand; they should fire a bit higher if the enemy was further away; and that, moreover, "the bayonet had been quite good enough for the soldier in the days of Souvaroff."

The objection in each case is the same; the correct method to obtain the highest fighting value out of a man is not to level down the potentialities of the weapon to his supposed intellectual capacity, but consists rather in giving him the most perfect weapon obtainable, and then taking care that his training is such as to get the utmost value out of so excellent an instrument.

The telephone may be misused—very probably, occasionally will be—on account of its very perfection as an instrument. But for every case where it is misused we may count upon many instances where it performs invaluable services.

It would be to take only a very narrow view of the question of the support of infantry by artillery, if we were to rest content with providing means of instantaneous communication between any infantry unit and the artillery told off for its own support. An army is an entity; the general is not bound to confine his support of an infantry attack to the artillery originally allotted to it. We must trust the general to make a skillful and discreet use of his means of communication; should he make foolish use of them, the proper course is not to reduce them, but to appoint a wiser commander. At Port Arthur, General Nogi had at times as many as forty telephones at work behind him. So far from confusion resulting in the great army under his direction, the opposite was the case. Infantry reports were taken by the staff told off for that purpose, and dealt with at once; artillery reports all coming to the artillery commander through the artillery staff officers detailed to take them. The staff dealt with minor details of movement and supply, noting all reports received and action taken in their staff diaries; the general being kept fully posted in all details of the progress of the fight, and all matters being brought to his notice that required his attention. The imposing array of telephones behind him had no terrors for him; quite the reverse.

The fact is, that the possession of a full knowledge of a situation does far more than merely assist a commander to frame his orders. It gives him a stiffening of moral fibre, due to his being able to substitute certain and decisive action for the hesitating and tentative tactics, which are the outcome of imperfect information and a nebulous situation. The same moral effect is very soon apparent in troops who know what they are expected to do, and their own place in the scheme. Certainty is the outcome of adequate corroboration of what is alleged. The method which I have outlined above ensures the opinions of individuals of one arm being tested by the technical knowledge of the other arm, both arms being inter-dependent.

The commander of a brigade attacking one portion of a hostile position has obtained a lodgment there; he is confident that, with the support of the artillery told off to him, his infantry can carry what is in front of him; this opinion is corroborated by the local artillery officer, who is with him, but in touch with the battery and observation station by telephone. Meanwhile, the general has received information, from cavalry or infantry sources of some other brigade, of the massing of hostile reserves in rear of the threatened point; this is instantly communicated by him to the artillery commander at his side. The latter at once takes appropriate measures for the artillery to co-operate in meeting this new condition, for dealing with which he can

dispose of the fire of all under his command, and not only of those told off to support the infantry brigade in question.

Observation of the hostile artillery, their position, condition, objectives, and probable intentions being peculiarly the province of artillery, the artillery commander will be able, from the telephonic reports which have reached him from artillery on either side of the attacking brigade, to inform the general of the best routes, from the purely artillery standpoint, for his reserves to support the attacking brigade, and of the violence, volume, and direction of the artillery fire to which they may expect to be exposed in the process.

In the above imaginary description of the working of the method suggested, I have assumed that the forces engaged are large, and that the actual battle-field is far too extensive for the commanders to control by what they can themselves see of the operations. It is under such conditions—the conditions of the present and future—that the rigid division of labour and responsibility, on something of the lines indicated above, are essential for the avoidance of chaotic confusion; and the latter condition is the negation of orderly and scientific mutual support. A hundred years ago, the general, from the eminence which he had selected from which to look down upon the field of battle, could himself usually direct every movement of importance by means of well-mounted gallopers; could, consequently, ensure the support of one arm by another, until the retirement or pursuit commenced. But not Marlborough or Wellington could have controlled the battle-fields of Liao-yang or the Sha-ho, with their scores of miles of fighting front, otherwise than by seeing through the eyes of subordinates and acting on information from them. Nor, with armies of the size used in modern war, could these great commanders have dealt with the mass of information poured in on them otherwise than through their staff; and the work of the latter will be lightened beyond description, and rendered far more effective, by important news reaching them by instantaneous channels.

In one only of the engagements of the South African War, which it was my fortune to witness, did I see anything approaching the fullest use made of the powers of artillery for supporting an infantry attack. On that one occasion the field of battle was of such a kind as to enable the artillery to give the closest support without danger to the infantry otherwise than from the chance of defective fuses—as the enemy's position rose abruptly, and the whole engagement could be clearly seen in all its phases. The support was close and admirable, showing how well our artillery understand how to support infantry when conditions favour their being able fully to see what they are doing. This latter condition they can never count on with any certainty in the future; they must, consequently, be trained to see through the eyes of others, and equipped for it.

I deduce three requirements from the above, to obtain the fullest results in the co-operation of artillery in supporting an infantry attack :—

1. The artillery and infantry alike must be better equipped than at present for inter-communication.
2. The procedure to be adopted, when artillery are supporting attacking infantry, must be more clearly defined, in regard to the duties and responsibilities of the staff of each arm.
3. Certain modifications in the training of artillery staff and *personnel* must follow the introduction of a more strict allotment of duties and responsibilities in regard to co-operation with infantry. The same applies to infantry in regard to their relations with artillery, so far as staff duties are concerned.

Beyond such modifications as have been indicated above, it appears to me that it would not be wise to go. That we require an adequate supply of the best mechanical means for electric inter-communication, in addition to our excellent signallers, can hardly be gainsaid. That we have not yet been given such equipment, is equally patent. Until this has been done, training of the kind proposed, which depends upon the possession of such materials, naturally cannot be carried out; nor can the precise allotment of duties and responsibilities in the directing staff in action, so necessary for the avoidance of confusion, be more than a pious aspiration until maintenance of touch with all units by instantaneous methods is made possible. But we cannot attempt to indicate a normal procedure otherwise than in the most general terms, for the support of infantry by artillery fire, though convinced that such support would be rendered more certain and more powerful by the improvements in *matériel*, training, and organisation advocated. "For the attainment of superiority of fire, no fixed rules can be laid down. . . . It is impossible to fight battles in accordance with a sealed pattern. Even the formations in which the troops approach the enemy or occupy a position must vary with the circumstances, and in like manner there can be no normal procedure for the combination of rifle and artillery fire."

¹¹ "Combined Training, 1905," Sec. 105 (2).

THE JAPANESE ARMY IN 1908

(Translated by permission of the Minister of War from the
Revue Militaire des Armées Etrangères.)

Continued from November JOURNAL, p. 1499, and concluded.

CHAPTER IV.

ORGANISATION OF THE JAPANESE ARMY IN TIME OF WAR.

On a war footing the Japanese Army comprises:—

- a. The mobilised active army.
- b. The dépôt troops.
- c. The reserve army, or *Kobi* force.

The mobilised active army (a) consists of:—

1. The nineteen divisions of the army (18 line divisions and the guard), each division reinforced by its reserve brigade.
2. Two independent brigades of cavalry.
3. Three independent brigades of field artillery.
4. The mountain artillery.
5. The heavy artillery.
6. The line of communication (technical) troops.
7. The field gendarmerie.

A.—The Mobilised Active Army.

As to 1. The composition of a mobilised Japanese division is as follows:—

The headquarters, comprising the general (divisional) staff, and the "Adjutantur."

Two infantry brigades, each of 2 regiments of 3 battalions. The effective strength of a regiment is 3,145 of all ranks; that of the two brigades, 12,618.

A regiment of cavalry of 3 squadrons (435 sabres).

A regiment of field artillery of 2 groups, each of 3 batteries of 6 guns and 6 wagons (1,106 men and 1,017 horses). Each regiment has an ammunition column of 27 wagons (one-third carrying high explosive shell).

A battalion of engineers of 3 companies (784 men).

A bridging train carrying 130 to 165 feet of bridge.

Four batteries of machine guns (one to each infantry regiment).

A sanitary corps.

A telegraph section.

Eight divisional ammunition columns (4 infantry, 4 artillery). The infantry columns have 60 carriages, the artillery columns 46 carriages.

Four ration columns, each carrying one day's supplies for the division.

Four or six field hospitals, and

A mobile remount depot.

The effective total of a division amounts to 18,875 men (about 15,000 combatants), 4,938 horses, and 1,765 carriages.

Each division is followed into the field by a brigade of the *Kobi* Army. In the late war the *Kobi* brigades were mixed bodies, composed of 2 regiments of 2 battalions, a group of field artillery batteries, etc.¹ The tendency in Japan is not to count too much, for field operations, on the reserve units of cavalry and artillery.² It is probable that in future the *Kobi* brigades, following the active (first line) divisions, will consist of infantry only. On the other hand, a recent order has increased the strength of *Kobi* infantry regiments from two battalions to three.

The mobilised divisions, including their *Kobi* brigades, have each a total effective strength of about 25,000 men (say 20,000 to 21,000 combatants).

2. The two brigades of independent cavalry consist each of 2 regiments of 4 squadrons, and a battery of 8 machine guns. The total strength of a brigade amounts to about 1,650 men and 1,680 horses. The two brigades would, therefore, be about 3,300 men and 3,360 horses.

3. The three independent brigades of field artillery each consists of two regiments. A regiment contains 2 groups of 3 batteries, each battery of 6 guns and 6 wagons, and also a regimental ammunition column of 27 wagons (of which 9 contain high explosive shell). The effective strength of a regiment is 1,106 men, 1,017 horses, 36 guns, 63 wagons, and 120 other carriages.

4. The mountain artillery consists of only three (independent) battalions, each of 3 batteries, altogether about 1,800 men and 54 guns. The units of mountain artillery would be distributed among the armies operating in hilly country.

5. The units of heavy artillery mobilise the following for the field army:—

a. Four regiments of heavy field artillery, each of 2 battalions (or groups) of 3 companies (or batteries) of 4 guns. One

¹ The Translator has always understood that the *Kobi* brigades attached to divisions during the late war were usually 8 battalions strong, and sometimes stronger.

² This is understood to mean that the reserve units of cavalry and artillery were not found very reliable for fighting in the first line, though they were probably sufficiently efficient for service on the communications.

of the groups in each regiment will be armed with 10.5-cm. (4.13-inch) guns, the others with 12-cm. (4.62-inch) or 15-cm. (5.90-inch) howitzers. Total strength, about 3,000 men. The exact number of heavy field guns to be attached to the different armies in the field is not known. At the last grand manoeuvres two groups of heavy batteries were allotted to each army (composed of two divisions). One group in each case consisted of three batteries of four 12-cm. (4.62-inch) howitzers, the other had a battery of 10.5-cm. (4.13-inch) guns, and two batteries of 15-cm. (5.90-inch) howitzers.

b. One or more siege trains of unknown composition. These siege trains will be manned by the two independent regiments of heavy artillery (the 3rd and 4th Regiments of Yura and Hoioshima). The strength in men of the siege trains may amount to 3,000 of all ranks, and they are provided with horses in peace as well as in war.

c. About two independent battalions of heavy artillery for manning the guns of fortified points, military posts, etc. (works of semi-permanent type?). They may amount to about 1,200 men.

6. *The Line of Communication Troops.*—These troops in peace time constitute a brigade. On mobilisation they provide:

a. The railway troops. It is fully realised that it is of great importance to push on lines of railways to within a few stages of the front, keeping pace with the troops as they advance. The *Hoju* will furnish the necessary number of men accustomed to earthwork to reinforce the three battalions existing in peace time.

b. Telegraph troops. In peace there is one battalion of five companies. In war the telegraphic communications are extraordinarily developed in the Japanese Army.

c. Balloonists. There is one balloon company of four sections. Eventually there is to be a company to each army.

d. Search-light detachments.

e. Bridging trains. The Army bridging equipment is constructed to carry the heaviest carriages of the heavy field artillery, for which the old divisional equipment was not sufficiently strong. The boats are larger and draw more water than those of the divisional trains. Each army in the field is to have 300 metres (nearly 1,000 feet) of bridging. The divisional equipment has at the same time been reduced from 144 metres (475 feet) to 50 metres (165 feet).

The total strength of the special line of communication troops may be estimated at about 10,000. To these must be added the troops required for the protection of the roads and railways, convoy work, etc. It is probable that at the beginning of a war four or five battalions to each army would suffice; eventually, say, twenty battalions, or about 20,000 men.

7. The Gendarmerie in the field would amount to about 4,000 men.

The total strength of the Army after mobilisation would accordingly be, in round numbers:—

	Men.	Horses.
19 active (first line) divisions, followed by 19 reserve brigades	475,000	100,000
2 brigades of independent cavalry	3,300	3,300
3 independent brigades of field artillery	6,600	6,100
3 battalions of mountain artillery	1,800	1,000
4 regiments of heavy field artillery	3,000	3,000
2 (?) siege trains	3,000	1,500
2 independent battalions of heavy artillery	1,200	—
Special (technical) line of communication troops	10,000	2,000
Troops protecting lines of communication	20,000 ¹	?
Gendarmerie in the field	4,000	2,000
	527,900	118,900

To these must be added:—

	Men.
22 battalions of heavy artillery	10,800
Formosa Division	15,000
Tsushima Militia	1,500
Troops in Saghalien	1,500
Railway Guards in Manchuria	10,000
Pechili Brigade	6,000

Say 45,000 men and about 6,000 horses, which brings the grand total of the Army to about 570,000 men and 125,000 horses.²

Grouping of the Higher Units.—Japan has not yet adopted an organisation by army corps. The divisions are grouped directly into armies, the number of divisions in an army being variable. The Commanders-in-Chief of the armies are appointed by the Emperor from among the Marshals and Lieut.-Generals.

¹At the beginning of the war the total strength of troops for protecting the communications would probably amount to 80,000 or 100,000 men. They would naturally be provided by the *Kōbi* army.—*Trans.*

²I have taken some slight liberties with the figures in the original, as there is at least one obvious misprint. The totals are practically unaffected, but if the full number of troops required for the communications be included, the grand total will amount to about 650,000 men and 150,000 horses.—*Trans.*

An army comprises :—

1. The Headquarter Staff, consisting of the General Staff properly so-called, and the Adjutantur. The headquarters of an army numbers 62 officers altogether, including civil officers, interpreters, etc. To each army is appointed a Commandant of Communications with his staff.
2. A variable number of divisions, followed by a corresponding number of reserve brigades.
3. Independent cavalry or independent field artillery, according to circumstances.
4. Heavy field artillery or mountain artillery, according to circumstances.
5. Siege train, if and when required.
6. A railway battalion, a telegraph company, and a wireless telegraphic detachment.
7. Search-light detachments.
8. A balloon section.
9. An army bridging train.
10. Troops for the protection of the communications.

The supreme command of the Army, as of the Navy, in war as well as in peace, is in the hands of the Emperor. The Supreme Council of peace time becomes in war the Superior Military Council. A new power also comes into play: the Imperial Headquarters Staff, in which are conjoined, under the orders of the Emperor, the Chief of the General Staff of the Army, the Naval Chief of the Staff, and a limited number of their subordinates. To mark the fact that it is the Emperor who exercises the chief command of the Army, even during operations in the field, the actual command of the armies in Manchuria during the late war was given to Marshal Oyama, Chief of the Staff to the Emperor, ordering and acting in the name of the Emperor himself, and having under his own orders a Deputy Chief of the Staff, General Kodama.

B.—Depôt Troops.

The units of the mobilised army are kept up to strength by corresponding units of depôt troops, each unit in the field having a depôt unit made up of the men left behind on mobilisation, the surplus reservists, the men called up for training, etc. In principle there is a depôt battalion to each infantry regiment, a squadron to each regiment of cavalry, a battery to each regiment of artillery, a company to each battalion of engineers and the train.

The depôt troops ought therefore to consist of :—

- Infantry, 76 depôt battalions;
- Cavalry, 23 depôt squadrons;
- Field artillery, 25 depôt batteries;
- Engineers, 19 depôt companies;
- Train, 19 depôt companies.

Besides which there are the *depôt* units of the heavy and mountain artillery, etc. The actual strength of all these *depôts* is very uncertain. At the end of the late war some *depôt* battalions were actually stronger in numbers than the regiment in the field to which they belonged.

C.—Army of Reserve, or Kobi Army.

It is difficult to estimate the strength of this force. The units are mobilised (like those of the first line) at the centres of regimental and divisional districts by means of the ten available annual classes of the *Kobi*.

Theoretically the *Kobi* army ought to consist of:—

72 regiments of infantry of 3 battalions.

36 squadrons (18 regiments of 2 squadrons).

18 regiments of field artillery of 4 batteries.

18 battalions of engineers.

18 train battalions.

We know that each division is followed into the field by a *Kobi* infantry brigade. What one does not precisely know is whether the units composing these brigades are taken from the 72 regiments, 36 squadrons, etc., enumerated above, or whether they are in addition to them.¹ Further, there is no information as to whether Japan would be able to find the horses required for the cavalry and artillery of the *Kobi* army.

With regard to *matériel*, however, it is certain that Japan has sufficient reserves of guns and rifles. These are, so far, of patterns anterior to the latest models, but they are of the same calibres and fire the same ammunition.

The *Kobi* troops can be detailed to garrison fortified places, to guard the coast line, or for the protection of the lines of communication. They can also be employed in active operations along with the first line.

The effective strength of the *Kobi* troops should be somewhere between 200,000 and 250,000 men, if we deduct from the total the brigades which follow the first line troops into the field. But if these brigades are not to be deducted, the total strength would amount to between 350,000 and 400,000.

We can now say, contenting ourselves of course with approximate figures, that the war strength of the Japanese Army immediately after mobilisation would amount to between 970,000 and 1,200,000 men, while the requirements of the Army in the matter of horses would be from 150,000 to 170,000.

We have seen also in the chapter relating to recruitment that at the present time Japan can count on upwards of 700,000 trained men—a number fully sufficient to mobilise the field army. The numerous annual classes of untrained² men would

¹See Translator's Note at end of this chapter.

²The writer evidently means *partially trained*, of whom there will be 780,000 available. See chapter on Recruiting.—Trans.

fill up the depôts and the units of the *Kobi* army, and would, after some months, be able to take their place in the ranks.¹ We have also seen that when the new regulation has had time to take full effect, Japan will be able to dispose of 1,628,000 trained men, of whom—

742,000 will belong to the Active Army.

780,000 to the *Kobi*.

115,000 to the *Kokeumin* (1st part).

The Japanese have, then, even at present, the men they require, and every year the reserves will approach nearer to the full totals.

TRANSLATOR'S NOTE TO CHAPTER IV.

Strength of the Kobi Army in Units.

The writer says: "Theoretically, the *Kobi* army ought to consist of 72 regiments of infantry, 36 squadrons, 18 regiments of field artillery, etc.," and adds: "We know that each division is followed into the field by a *Kobi* infantry brigade; what one does not precisely know is, whether the units composing these brigades are taken from the 72 regiments, etc. . . . or whether they are in addition to them."

In the first place, it seems obvious that "theoretically" there should be not less than 76 regiments of *Kobi* infantry, 38 squadrons of cavalry, 19 artillery regiments, etc., and not as stated. That is to say, the units of the Guard Division should have their corresponding *Kobi* units as well as those of the 18 line divisions. It is highly probable that these Guard *Kobi* units already exist, for if they do not, in what regiments do the men of the Guard perform their *Kobi* service? In the German Army, on which that of Japan is modelled, there is a *Landwehr* of the Guard as much as of any other part of the Army. Further, the writer has told us that the Japanese General Staff is anxious to produce a *Kobi* army which shall be the exact counterpart of the first line, both as to the number of units and in the strength of trained men available. And this is quite in the spirit of the modern system of military organisation, which attaches much more importance to the second line than was the case thirty years ago. If, therefore, for some reason or other the Japanese Guard has no corresponding *Kobi* division, we may be sure that one will be created as soon as circumstances permit; and not only this, but also *Kobi* units corresponding to the regiments forming the brigades of independent cavalry and artillery, the regiments and groups of heavy batteries and mountain guns, so far as these may now be wanting. Doubtless, also, every effort will be made to bring to complete efficiency the *Kobi* cavalry and artillery, which did

¹ As the *Kobi* will possess about 780,000 fully-trained soldiers who have passed through the first term, its units will not require filling up with partially-trained men. The latter, as in the case of the first line, will go to the depôts and make good the waste of war.

not, we understand, give entire satisfaction during the late war.

Now, with regard to the point on which the writer expresses a doubt, viz., whether the units composing the brigades which follow the first line divisions into the field may not perhaps be additional to the theoretical strength of the *Kobi* army. The doubt has probably arisen from the fact that the long term of *Kobi* service produces, or at least will produce, such large numbers of men that it would apparently be possible not only to form as many *Kobi* units as there are first line units, but a good many more. If such a surplus of men exists, or will exist, when the new law has taken effect, the Japanese General Staff will doubtless know how to utilise it to the best advantage. But it is pretty safe to assume that, for financial reasons, if for no other, the number of units in the *Kobi* army is not intended to be in excess of that of units of the first line. Consequently, if the first line divisions in the field are to be reinforced, as heretofore, by *Kobi* brigades, about half of the whole *Kobi* army will be thus absorbed, leaving the other half for the protection of the lines of communication and similar duties.

It has, however, been suggested, in the Note to Chapter I., that the brigades which reinforce the first line divisions will be formed in future from the surplus first line reservists, as is understood to be now the plan in Germany. If this is the case, we may expect to see in the next war entire divisions of *Kobi* troops taking the field alongside of the first line divisions. In this connection, it should be remembered that divisions of *Kobi* troops were actually formed in Japan during the late war, and were sent to the front, where they did good service.

On the Russian side, also, reserve troops were employed in very large numbers, and on a perfect equality with the first line. The tendency of the present day is to make more and more use of reserve troops in the field, and to regard them as equal in fighting value to the first line troops. This is not so surprising when one reflects that these troops are composed of *fully-trained* and disciplined soldiers in the very prime of life, and that a very few weeks of embodiment will bring units so formed to a high state of efficiency.

The translator's rough estimate of the probable strength of the Japanese field army in the near future would be: 19 first line divisions of three brigades, with independent cavalry and artillery, etc., 500,000 men,¹ and 19 *Kobi* divisions of two brigades, with independent auxiliary arms, 380,000 men; total, 880,000, of whom perhaps 120,000 to 130,000 might be required for the protection of the lines of communication and bases, leaving 650,000, divided into four or five armies, for the front, while there would be ample reserves at home for keeping all the troops in the field up to full strength. And this out of a total peace establishment of 220,000 to 250,000 men!

¹These figures include non-combatants (about 15 per cent.).

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be additional to the fact that the long term of

doubt has probably arisen from the fact that the long term of

form as many Root units have the first line units, but a

good many more. If such a surplus of men exists, or will exist,

the new law has been issued, the Japanese General Staff

will be in a position to assume that for tactical reasons, it for

other, the number of units in an army is not intended

to be in excess of that of the first line units, but it is

if the first line divisions in the field are to be reinforced,

hereafter, by Root brigades, the other half for the pre-

army will be thus absorbed, leaving the other half for the pre-

section of the lines of communication.

CHAPTER X

REVULSION IN THE SPIRIT OF THE SQUADRON—THE BEGINNING OF THE END OF THE FORTRESS—ANOTHER MYSTERIOUS INCIDENT—OUR LAST DAYS IN PORT ARTHUR.

IT was quite curious to note the revulsion that took place in the general feeling afloat during the next few days. I have repeatedly noticed such changes during the war, but cannot explain them. At first the masses do not believe in the intentions their leaders have openly avowed. And this notwithstanding that the latter had never given the slightest cause for suspecting the honesty of their intentions. The men ought, therefore, to believe them. Then there is a sudden revulsion. These same people are now as firmly persuaded that their leaders have this or that honest intention, although it has never been expressed and only presumed. How is this? It is a psychological riddle. Savants may solve it—or perhaps the spiritists? Who can tell?

No more grandiloquent orders were issued announcing the resumption of the offensive, with simultaneous appeals to the Heavenly Hosts. No sensational rumours were spread in the town. The clerks who were sent to the Admiral's office did not bring back bits of news confided to them by some "very reliable people"; yet there was something in the air.

In the mess I was once more treated as a messmate. No one held aloof from me, but all were ready to hear my advice or my views on this or that. "On deck," that is, on duty, my orders were no longer merely formally executed, but in the manner I was always anxious to see—that is, with zeal and intelligence.

Whence came this change in our relations? The fact that I was their superior had only quite recently separated me

from my messmates like a solid wall. Why did this no longer interfere with our familiar intercourse? Who had pulled down this wall?

It is true some of the battleships had got back a portion of their 6-inch guns, which they had lent to the land forts. But it had always been promised that these guns would only remain on shore so long as their ships were laid up for repairs, and that they would be returned for certain. That was not the whole reason. No; I repeat, there was something in the air.

What now followed proved that my deductions were correct. About this time Admiral Vityeft received orders to proceed to Vladivostok with the squadron. This categorical order came direct from His Majesty. It left absolutely no doubt as to its meaning. How unlike the orders we generally received from the Viceroy! In these there was always some saving clause to cover their author in the event of the enterprise failing. The gentlemen who admire Admiral Alexeieff and who defend his actions before the war and during the war, pretend that he had repeatedly "categorically" demanded from Admiral Vityeft "decisive" steps.

I should like to submit this to the reader's judgment. The most "definite, categorical" order from the Viceroy was brought to Port Arthur on 3rd July by the destroyer Lieutenant Burakoff (even his defenders admit that). It ended textually thus: "Keep before your eyes the fact that the squadron can only remain in Port Arthur as long as it is safe there. In the other eventuality, go to sea in good time and proceed, without engaging in battle, if this be possible, to Vladivostok."¹

Can these "directions" be called a categorical demand for decisive steps? There was not a word in this of the possibility of defeat, and this was both a safeguard for the Viceroy, who issued the order, and a trap for the one who was to execute it. The manner in which the phrase "if this be possible" is introduced is particularly clever. What does it refer to?—the battle which is to be avoided or the voyage to Vladivostok?

On 7th August one could well say: "This is the beginning of the end." On that day Port Arthur itself was bombarded for the first time from the land side. The bombardment commenced at 11.35 a.m. From the shell which did not burst we made out that a battery of 4.7-inch guns was at work. The Japanese had apparently profited by the experience of the Boer War. Until the regular siege artillery arrived, they took ships' guns of that calibre and mounted them for field service.² The

¹ *Ruskaya Starina*, April and May, 1907:—"The Squadron of Port Arthur before Its End," by Bayaylomer.

² It would be interesting to find out whether these mountings were extemporised or had already been prepared before the war.

Japanese fire was not continuous, but in series of seven or eight. Between these they paused. The first series fell altogether in the main street of the old city, near the Port Hospital; the second fell more to the westward, that is, on the quay of the commercial port. It destroyed the coal which was stacked there. The third series fell on the open place in front of the Admiral's landing-steps, a little to the westward of the place where the *Tsesarevitch* lay alongside. We saw that she had been hit. Luckily, only one of the shells was well placed. It destroyed the wireless office on board. The operator, a torpedo-machinist, was killed as he was sending a message. The admiral commanding, Rear-Admiral Vityeft, was slightly wounded in the leg by a splinter. About 1 p.m. the fire was directed towards the entrance. As before, the Japanese fired series of seven or eight guns. These series were apparently laid for successive points from south to north.

I say it quite frankly, when I saw from our bridge that the Japanese shell, by the way they pitched, followed a regular course moving from the southward of us towards the berths of the cruisers, my heart felt heavy. Heavy, not alarmed. The chances of war decree that not every mine hits a ship, nor every splinter a forehead. A bombardment is a game of chance, in which one stakes one's life. The chances of losing one's life at a bombardment are much less than those of a particular number turning up at roulette. But the novice at this game is excited at the idea that he might possibly win enough on one stake to set him up for life. Similarly in war, everybody in his first battle believes himself to be the predestined victim of the first shot. Later on this passes away. The game becomes a real game.

On 7th August our officers, as well as the men, watched this game with equal eagerness, although it was forbidden to come on deck to look on at the bombardment.

"They fire well and, above all, systematically," the gunnery lieutenant declared in a dogmatising manner, and directed his binoculars at the spot where the shells pitched.

"Oh, this series is evidently passing over us! Look! Do you see?"

One shot had gone wide and struck far on our right. Another hit somewhat nearer; a third off the starboard beam.

"The devil! Where will the next one pitch?"

For some seconds there was the silence of death (just as round the roulette table whilst the little ball is skipping over the ribs on the revolving disc). The shell strikes the water and bursts. It was on the port beam, and splinters rained against the ship side and over the deck.

"No hit, but nearly! Good luck this time!" people were calling out all round. This was said with an air of utter indifference. It even sounded a little like mockery at the enemy's failure, at the fate which somehow had not reached us.

Everyone felt relieved, like a man who has been pitched overboard, head first, and who suddenly comes to the surface and draws a deep breath.

The following shots of this series fell to the left at increasing distances.

The captain came up to me and mentioned, in an irritated voice, that the flagship had now made the signal for the second time—"Don't keep more men on deck than necessary," and that we seemed to be having a regular bazaar going on on the upper deck. He knows well enough what drives the men up from below. These men, who have been "proved in the fire" long ago, can stand this game easier in the open. They want to be able to see and hear the shell, they can't stand remaining between decks without any occupation and waiting for the next shell to knock them over.

"Can't you devise something?" the captain asked in a more gracious tone. "Don't you know of some occupation for the men?"

A happy thought strikes me. The cable deck is just now the best protected space. A lecture might be held there for the ship's company. Sub-lieutenant Sh—— is a talented lecturer, he has already procured the crew many a happy half hour during the monotony of the siege by his talent. He must sit down there and recite "The Fair of Sorotchnisk."

The news of this spread all over the ship. The upper deck quickly became empty. Salvoes of laughter soon came up the fore-castle hatch. They sound strange alongside the metallic buzzing of the enemy's shell and the dull roar of our guns replying to them.

I went down two or three times. Upon my word, it was really very jolly there.

Whilst watching this bombardment I observed something which was very satisfactory for us. The Japanese made very good practice, but their fuzes were bad. I carefully watched ten series, and noted the shell which did not burst. The shell all struck on land, that is, on solid ground. None the less thirty-two out of seventy-six did not burst.¹

The bombardment lasted all day. The guns of our land forts and of the battleships replied, but this infernal little Japanese battery was so well hidden that we never managed to destroy it.

At seven in the evening it came on to rain. Soon it was coming down hard; this lasted till 11 p.m., with few interruptions.

Just before sunset the Japanese concentrated their fire on the right centre of our land front and then delivered a very

¹ The Japanese removed this defect during the course of the war. Their shell burst brilliantly afterwards. (Compare "The Battle of Tsushima.")

determined attack. They probably thought they could turn the bad weather to account. At first we only heard single rifle shots. Soon it turned into a continuous rattle. The forts worked their searchlights at the same time and fired star shell.

The same evening, as we were lying on guard in the entrance, we observed a mysterious event, which was never cleared up subsequently.

About 11.25 p.m. we noticed out to sea to the south-east, about 8 or 10 miles off, a faint light, which rapidly grew to a big flame surmounted by clouds of smoke. It was evidently a ship on fire. We were keeping a sharp look-out all round, in hopes of getting some clue as to what was going on. Suddenly a bright light flashed up, a good way to the right of the fire, bearing almost south, and a few seconds later we heard a dull detonation as of an explosion. The whole thing was enacted in a few moments, but was observed simultaneously by several people. Later we could see nothing in that direction. Darkness and silence reigned there. On the other hand, the fire raging to the south-east increased rapidly. The unknown vessel burnt so mightily that even the clouds above it turned blood-red. Perhaps it was still moving by its own means, perhaps the tide was taking it along, but the distance became less and less.

Shortly before midnight we saw a new explosion, this time much nearer to the burning ship.

About 12.30 the brilliantly illuminated foremast of the ship was taken by our Barr and Stroud rangefinder. The distance was 50 cables (5 miles). With the glass one could distinctly make out the ship's side glowing red. Along it a row of intensely bright spots were visible. These were evidently the scuttles out of which the flames were bursting from the interior.

The burning ship did not keep on a straight course, but turned sometimes to starboard and sometimes to port. Sometimes we saw her broadside on, sometimes she turned her bow or her stern towards us. For the seaman this was a sign that invisible friends were surrounding the ship, trying to take her in tow. Soon after 1 a.m. their efforts seemed to have succeeded. The ship slowly moved away to port, that is, to the northward. We lost sight of her in the direction of Talienwan at about 1.45. Neither our batteries nor the guard-ship fired.

There were great speculations on the *Diana's* bridge. What might this drama be which we had just witnessed? Quite lately the Chinese had repeatedly reported to us that the Japanese were preparing a new desperate attempt to block up our squadron in Port Arthur. The fire-ships and block-ships were not to come singly this time, but in groups of four abreast, secured together with chains.

Had the Japanese, in such an attempt, come upon the mines which our destroyers had laid out during the preceding nights? But then what started the fire? Was it caused by an

accident or through carelessness? It was, anyhow, clear that the Japanese had been unlucky that night.

During the night the batteries on our land front only fired occasionally. On 8th August the bombardment of the town and harbour by the land batteries was continued at 7.45 a.m. Our gun-boats and destroyers were all sent out into the roads. Here our mine-sweeping flotilla was working with might and main.

At 9 a.m. a lucky shot of the enemy's set fire to a shed in which was stored a quantity of lubricating oil in drums (the shed was close to the south-west corner of the East Basin). It was just as well that the main oil dépôt close by had not been hit. A bright flame at once shot up, and a gigantic cloud of thick black smoke rolled up into the air—for the Japanese an admirable mark. The enemy now directed his whole fire on the spot. However, on that day they were not successful. The Japanese knew the direction very accurately, but they were somewhat out in distance. Consequently they poured an incessant stream of fire for several hours on the bare northern slope of Golden Hill, on which there was not a soul.

The parties sent from the ships and port establishments to put out the fire suffered no losses.

The main dépôt was successfully cleared. The burning oil, flowing out of the drums, which had burst, was diverted by a trench into a natural hollow in rear. Here it partly burned itself out, partly was put out, that is, smothered with earth.

Towards noon the fire was out, and at one o'clock the bombardment suddenly ceased.

The Admiral expressed his "special satisfaction" by signal to the *Peresviet*. We heard that she had been successful in hitting the "infernal little battery" and silencing it.

During the afternoon, and especially in the evening, a fierce battle was raging at our right centre. The light northerly wind occasionally brought us the rattling sound of machine gun and infantry fire, which penetrated the thunder of the larger guns. There was a pause between 10 and 10.30 p.m., then the fight broke out afresh, and continued with great violence until midnight. Occasionally short messages from the front told us that the fight was for Takushan Hill. It passed several times from one hand into the other. Finally, the hill remained neutral for a while. We had evacuated it, but the Japanese were unable to maintain themselves on it. The mortar battery on Golden Hill threw its 11-inch shell on those heights throughout the night at regular half-hour intervals. In these circumstances it was quite out of the question for men to stay there, leave alone to entrench themselves.

At 8 a.m. on 9th August we noticed that the Japanese had got their "infernal little battery" into working order again, but had moved it. They started bombarding us once more. Their fire was mainly directed against the battleships in the West Basin. There were a few hits, but they did no damage.

Again the *Retvisan* was specially unlucky. She had a lighter lying alongside, containing two 6-inch guns brought back from the land front. A projectile hit this lighter and it sank with the guns. The battleship was hit below the water-line. The damage was not serious, but the hole admitted about 400 tons of water. This was a quite superfluous cargo, which was specially disagreeable in view of the prospect of having to fight a decisive battle. Besides this, the turrets and casemates of the *Retvisan* were hit. The ship had three killed and several wounded, the captain amongst the latter (a slight wound only). The bombardment and our reply to it lasted all day. Later in the evening there was a short but fierce fight on our right wing. The ships of the squadron hastily filled up with coal and stores. The Japanese had not been in sight to seaward these last two days, and during that time they had not laid out any mines in the roads.

The night of 9th-10th August was calm and hot (80° F.), but not close, thanks to a light breeze from the north. We had completed all our preparations for going to sea, and everyone was now sleeping soundly, so as to gather strength for the coming day.

I will not indulge in speculations as to the feelings with which the squadron greeted the sun on 10th August. During these last two days there had hardly been any communication between the ships. I will merely endeavour to describe the general feeling on board the *Diana*. There was nowhere anything like the enthusiasm which had marked the short time under Makaroff. Neither were we filled with that craving for revenge, as was the case during the first moment after the foundering of the *Petropavlovsk*, nor were we in the state of elation as after the unexpected success of 15th May¹; yes, not even in that state of cheerful determination with which we had greeted the signal to weigh on 23rd June. All that was a thing of the past. These events had left deep marks on every heart, but the feelings they aroused could not be reproduced. Our people, who had long since received their baptism of fire, and who had now so often looked death in the face, prepared for this battle as for a serious task, full of responsibility. "The thing is settled. To-morrow morning we go out into the deadly fight. Thank God!—Apparently no one is thinking of himself. One's duty has to be carried out." These few lines I scribbled in my diary, as I was going to bed on the eve of sailing.

There was yet something in the minds of all which I should not like to pass over in silence. There was a certain sense of satisfaction. We felt that the dissensions between the leaders as to their intentions, and the masses, with all their hopes and aspirations, were over at last.

[¹ The blowing up by mines of two Japanese battleships.]

During these last three days of land bombardment one had often heard the remark, with a ring of malice in it: "Perhaps 'they' will now realise that the Basins of Port Arthur are the graves of our squadron." The pessimists had then replied: "The grave? That would not be so bad. But this kind of death would not last long, and then would come the resurrection under the Japanese flag, and that is much worse."

The news that our sailing was imminent did not produce any enthusiasm, but only a general sense of relief. It was clear to all that we were bound to go out. The masses saw that so clearly that the reluctance of our leaders had already inspired the most terrible suspicions in the more excitable heads. Sometimes it seemed as if we were again in the frame of mind which obtained in the early days after the surprise attack on 8th February. Just as then, so now, we nearly heard the cry of "Treason! Our leaders have betrayed us!" "Could there be anything worse than that?"

(To be continued.)

THE TERRITORIALS AND THE DEVONSHIRE HORSE CENSUS.

By Colonel J. C. DWYER, A.V.D. (retired).

THE success which has attended the taking of a census of horses in Devonshire is remarkable in more ways than one. It indicates that public interest in matters of horse supply has not died out with the close of the South African War. It displays the ease with which somewhat delicate investigations may be successfully carried out, when entrusted to county residents and local officials. Furthermore, it demonstrates the comparatively small cost attending such operations when skilfully planned and loyally supported.

In the very interesting paper read by Lord Fortescue before the National Defence Association we have summarised the results of this experiment, and are furnished, for the first time, with tangible figures wherewith to gauge the horse strength of the County of Devon. In perusing a paper of this kind, the questions naturally arise, in what way can the information furnished be utilised? Will it assist those engaged in framing and perfecting schemes of mobilisation? and if so, in what way? It is perhaps too early at present to estimate its value. Other counties, we are informed, are to follow suit, and until the whole returns are complete and to hand, an opinion as to the actual value of such statistics must necessarily remain in abeyance.

In the meantime we must rest satisfied with the figures before us, for there is evidence of much painstaking in their collection, and as far as they go, they seem to be very complete, and to embrace the whole horse strength of the county. No less than 34,400 horses are returned as "serviceable" out of a total of 43,900. It is a large proportion, and should furnish an ample supply to meet the needs of the mounted territorial units of Devonshire, and leave a liberal surplus.

In order, however, to arrive at a more accurate estimate as to the potential value of such statistics, it is necessary to assume that war conditions prevail, and undertake a task of dissection and see how the figures work out under these conditions. It is proposed in this paper to deal with two points only, *viz.*, "age" and "soundness."

Age.

With reference to age, 12 per cent. of those classed amongst the "serviceable" are 4-year-olds, and it being generally agreed that horses of this age are unfit to stand the rough work of active service, they may, without further consideration, be eliminated from the calculation, and the balance brought down to 30,272—roughly 30,000.

To estimate the number of "aged" horses, classed also under the heading of "serviceable" is not so easy a task. Rather more than 50 per cent. are returned as "eight and aged," and as numbers of horses will do excellent work up to 16 years, and even over that age, the omission need not greatly affect the estimate, more especially as it is stated that horses "unsuitable for hard work on account of *old age*, lameness, or weakness" have been recorded as "unserviceable." In this regard Lord Fortescue remarks:—"The proportion of 'unserviceable' horses would have been very much larger if the standard of classification had been as high as that of purchasers of remounts in ordinary times." No doubt this would be so. Horses purchased as remounts are expected to work 10 or 12 years. They must, as far as class, colour, age, height, weight, quality and soundness, be up to army standard, and consequently a large number of the horses included in the Devonshire return as "serviceable" would undoubtedly fail to qualify as such, for the percentage of rejections in the army is high when compared with the number of horses inspected. What this percentage would be, however, need not now be speculated upon, for the census problem is interesting only in so far as it implies a preparation for a state of war.

Soundness.

To dispose of the question of "soundness" and so proceed another step with the analysis of the figures, it is first necessary to determine approximately what will be the loss on this balance of 30,000 horses, when required for military purposes and submitted to the necessary ordeal of an examination for soundness. No official scale has ever been issued by which the proximate loss likely to occur in the process of weeding out the unsound from a batch of horses can be estimated. The percentage must necessarily vary more or less under different conditions, but even assuming such a table or scale has been compiled, it is not at this moment at our disposal, and therefore it becomes necessary to improvise one by reference to some shorthand notes taken at inspections during the busiest time of the South African War, for the requisite data upon which to work. They should at least furnish a fair average war standard wherewith to effect a measurement. If they err at all, it is on the side of generosity, for, during the period to which they refer, the military authorities were very pressed to find horses, and fresh "instructions," greatly lowering the established standard, were issued for guidance in order to facilitate and expedite purchases going on all over the United Kingdom.

The "instructions" (which are quoted from memory) were to this effect:—"All horses between the age of 5 and 12 years, from 15 to 16½ hands in height, being practically sound, and likely to do hard work for *two years*, were to be bought."

Taking, haphazard, the reports on 1,000 of these horses, the property of eight different firms, all of which horses, when

viewed *en masse*, appeared fit for the service, no less than 208 were rejected for unsoundness, and this, too, as already remarked, at a time when the standard of soundness was touching its lowest point. Roughly, this rate amounts to 20 per cent., and if applied to the Devonshire figures, would cut down the balance of horses recorded as "serviceable" to 24,000. Lord Fortescue is disposed to think the percentage (21 per cent.) of "unserviceable" horses rather a high one. Perhaps this may be so; until, however, the other returns come to hand it will be impossible to make a comparison. In any case, whether it be high or low, as compared with other counties, it certainly represents a serious leakage and great loss in horse strength to Devonshire.

Possibly not the least useful purpose which census-taking and similar investigations in regard to horses will serve is to set numbers of people thinking over the problems raised, and so perhaps lead to the discovery of some simple and inexpensive method by which a loss such as this one, for instance, resulting from the presence of a large number of unserviceable horses, may at least be greatly diminished. Regarded from a patriotic point of view, it should be generally recognised that next to personal service in the territorial ranks should come the keeping of a horse or horses, fit and suitable to serve in the army in a national emergency.

Within the twelve miles' radius can be found two large horse-owning firms, the one directed by a keen business man, greatly interested in his horses, which he not only buys, but personally supervises. In the other, the horses are left to subordinates to manage, whose interest is entirely centred in getting through their daily routine work with dispatch. Both these firms are said to pay on an average about the same sum of money for their stock. In the one case, however, no less than 80 per cent. of the horses are fit and in condition for immediate military service, whilst in the other not more than 10 per cent. would be able to qualify. In other words the one firm is contributing largely, though indirectly, to our national strength, whilst the other, owing to mismanagement, altogether misses its opportunity. Such instances, unfortunately, are far from exceptional, and when brought to notice, serve to dispose of a very common fallacy, frequently imported into discussions on horse supply, *viz.*, that the whole of this question resolves itself exclusively into one of spending money.

Until it becomes more generally recognised that horse flesh is a delicate and very perishable commodity to trade in wholesale; that rapid depreciation in the value of the best stock, and heavy losses are easily incurred, and always follow the absence of good management, personal care, and proper organisation, no great improvement can be looked for in such matters. Prodigal expenditure in the face of a grave emergency can never be made to take the place of timely preparation, even

though millions should be expended in the effort. South African experience proves this up to the hilt.

Lord Fortescue's paper does not tell us what the strength of the Devonshire mounted units is to be on mobilisation, and what excess of horses it is calculated would remain over and above the number. Nor does it inform us how the census horses would "pan out" as regards class when allotted to the local units. An ideal condition would no doubt be that each county should make provision for its own horse needs within its own boundaries.

Another point suggested by Lord Fortescue's paper is that no one quite knows what, ultimately, will be the attitude of the senior and dominant partner in the service toward the junior one, when they take the field together. In peace time the regulars may be found conciliatory and perhaps obliging, but on mobilisation a change of temper becomes unavoidable, when all the latent activity of fierce competition to secure horses at any cost, is set free. It must never be forgotten that the instincts and traditions of the army proper are predatory, and no one can be quite sure that the mounted territorial units will prove themselves able to hold on to their own in the face of a horse famine in war time; or how far, under such circumstances the county associations will be able to resist inroads upon their territorial horse preserves. It requires no great experience of army methods to understand that when the time comes a real danger will threaten the efficiency of territorial mounted units in this direction. We have only to call to mind a few of the object lessons furnished during the late South African War to establish this. The regulars do not, at such times, spare even their own branches of the service. What then, it may well be asked, would be the fate, say, of a territorial unit, up to full strength in horses, standing fast and awaiting orders, whilst a service regiment, under orders to move, is (to use a nautical phrase) "alongside," with an enterprising and clamouring commander, bent upon making good his casualties in horseflesh, at any cost, and at anybody's expense?

Certainly with an outlook such as this it is well to utilise the present lull in our affairs to the best advantage, and that the territorial body should look well to its armour in these piping times of peace. By such means when war is in the air, and the strain comes, it may be prepared, and perhaps able, to resist pressure from the outside and so preserve its own mounted units intact and efficient. For the time being it must be conceded that the census just completed with so much success, will at least inform the good people of Devonshire the full extent of their present horse possessions, and nothing perhaps will tend more to keep alive the public interest in this class of property than the stocktaking which Lord Fortescue suggests should in the future be carried out annually.

NAVAL NOTES.

The following are the principal appointments which have been made:—

Rear-Admirals—F. S. Inglefield to be Admiral Commanding Coast-guard and Reserves; E. A. Simons to be Admiral Superintendent, Malta Dockyard; F. C. D. Sturdee, C.V.O., C.M.G., to be Rear-Admiral in the First Division of the Home Fleet; A. A. C. Galloway to be Rear-Admiral in the Third Division of the Home Fleet. Captains—Commodore A. G. H. W. Moore, C.V.O., to be Director of Naval Ordnance and Torpedoes; S. A. G. Calthorpe, M.V.O., to be Captain of the Fleet to Admiral Sir W. H. May, G.C.V.O., K.C.B., Commander-in-Chief of the Home Fleet, with temporary rank as Commodore 1st Class; H. H. Torlesse to be Captain-Superintendent of Sheerness Dockyard; C. L. Napier to "Inflexible"; C. W. Keighley-Peach to "Hogue"; J. C. Ley to "Cornwall"; W. O. Boothby, M.V.O., to be Naval Assistant to Second Sea Lord; L. Clinton-Baker to "Minotaur," as flag-captain.

Admiral-of-the-Fleet Sir A. K. Wilson, V.C., G.C.B., G.C.V.O., has been appointed First Sea Lord in succession to Admiral-of-the-Fleet Lord Fisher, G.C.B., O.M., G.C.V.O.; it is understood that Sir A. K. Wilson will officially enter upon his new duties on the 21st of January.

The Admiralty have officially announced that, to avoid confusion, the terms "Nore, Portsmouth and Devonport Divisions," as applied to the ships of the Third and Fourth Divisions of the Home Fleet attached to the respective ports, will be discontinued and the following terms employed:—"Nore Sub-Division, Home Fleet; Portsmouth Sub-Division, Home Fleet; and Devonport Sub-Division, Home Fleet." The Rear-Admirals, Captains "D," and inspecting captains of submarines will be referred to in future as "sub-divisional officers."

The following are the principal appointments which have been made:—Capitaine de Vaisseau—J. A. Chéron to "Mont-calm." Capitaines de Frégate—R. P. Chevalier, A. F. G. Langier to be Capitaines de Vaisseau; M. B. G. Merveilleux du Vignaux to "Ibis"; A. C. E. Borsat de La Pérouse to "Manche"; A. F. Serès to command of Torpedo-Flotilla in China.—*Journal Officiel de la République Française.*

Reorganisation of the Superior Council of the Navy.—A Decree reorganising the Superior Council of the Navy was published on the 1st October last. This Council, under the Presidency of the Minister of Marine, will, for the future, be composed of the four Vice-Admirals Inspector-Generals, the Vice-Admiral Chief of the General Staff of the Navy, and the Vice-Admirals, who, during the previous two years, have been in command of a squadron.

The Minister can summon to a seat on the Council, with a deliberative voice, when matters relating to their Departments are under consideration, the Inspector-Generals of Naval Engineering, Commissariat, Medical, and

France.

Naval Works. The Directors and heads of the central administrative service can also be summoned by the Minister to the Council, with a deliberative voice, when questions relating to their department come up for discussion.

The New Torpedo-School Division.—In order to assure unity of instruction among the different specialised branches pertaining to the torpedo and electrical services, a new torpedo-school division is being formed, which will be under the command of a Rear-Admiral. The division will include :—1. The school for torpedo officers, which is installed on shore; 2. The school for seamen torpedo men on board the *Marceau*; 3. The school for torpedo mechanics on board the *Cécille*; 4. The central school of instruction for the heads of the wireless telegraphy stations at Toulon; 5. The school-ships on board which the torpedo apprentices are being trained. The Central School of Instruction for Wireless Telegraphy at Brest was suppressed on the 1st November. Rear-Admiral Guillon, who has been appointed to the command of the new Torpedo Division, has hoisted his flag on board the battleship *Brennus*, while Rear-Admiral Le Bris, who has been appointed to the command of the Gunnery School Division, has his flag flying in the battleship *Masséna*; both these ships are to be kept fully manned and ready for service.

Launch of the "Mirabeau."—The new first-class battleship *Mirabeau* was successfully launched at Lorient on the 28th of October last. She will be the fifth of the six battleships of the 1906 programme to take the water; of the four already launched the *Voltaire* was built at La Seyne, the *Diderot* and *Condorcet* at Saint-Nazaire, the *Danton* at Brest, and the sixth, the *Vergniaud*, is being built at Bordeaux. The five that will have been launched in 1909 represent a total of 91,590 tons, the most important and largest amount ever launched in France in one year; it is nevertheless inferior to the tonnage launched in Germany in 1908-9, during which period 104,971 tons of new ships were constructed.

Recommendations of the Conseil Supérieur de la Marine.—The French fleet, according to the Superior Naval Council, should consist of 45 battleships, 12 scouts, 140 torpedo-vessels, 64 submarines, and 3 mine-layers.

No more armoured cruisers should be built; these vessels no longer differing from battleships, except in having fewer heavy guns and more speed, the Council has decided that they are unnecessary. Such armoured cruisers as already exist should be utilised in divisions on foreign service.

The scouts should be lightly armed vessels, but of sufficient size to keep the sea in any weather, and of great speed—5,000 to 6,000 tons at least.

There should be two classes of torpedo-vessels; one class, for use with the fleet, should be of at least 600 tons displacement; the other, constituting the coast flotillas, should not exceed 300 tons displacement. The Council proposes 60 of the first class and 80 of the second.

The submarines should all be of great radius of action and designed for offensive purposes, the inshore defence of harbours being assured by the older offensive boats and no longer by boats specially constructed for defensive purposes.

France.

The Council, furthermore, has called attention to the necessity of constructing a special practice ship for midshipmen, and of providing appropriate material for raising and dragging for submarine mines; the recent purchases of steam trawlers by the British Admiralty may serve as a guide in this respect.

As regards the fighting ships of all classes, the Council expressed the wish that the proposed programme be completed in 1925 at the latest. It has fixed as age limits for battleships 20 years and for scouts and torpedo-vessels 15 years (there is insufficient experience as yet to fix an age limit for submarines).

According to these figures, it will be necessary to lay down, from 1910 to 1922, inclusive, 39 battleships, or 3 a year; 12 scouts, or 1 a year; 55 squadron torpedo-vessels, or 4 a year; 75 flotilla torpedo-vessels, or 6 a year; and about 40 submarines, or 3 a year. Taking all these vessels at the average displacements now adopted, we arrive at an annual expenditure of 230,000,000 francs (£9,200,000) for new constructions, instead of the 120,000,000 (£4,800,000) allowed in recent years.

Regarding naval stations, the Council expressed the opinion that that of Rochefort should be entirely given up; that Lorient should become merely a building yard for large ships; that Cherbourg, Toulon and Brest should remain as they now are, yards for building and repair, the former building only submarines and torpedo-vessels; the last only large ships. It recommended that Bizerta be fitted as a principal base of operations, on the same footing as Brest, Cherbourg and Toulon, and that each of these ports have at least four docks capable of taking the largest ships of the fleet. It insisted that at least three-fourths of all vessels be constantly in commission with full complements, and that the number of men under enlistment be always amply sufficient for all necessary services in addition to the manning of these vessels.

Finally, the Council, withdrawing from the position which it took in 1907, declares itself in favour of unity of calibre and gives the preference to a main armament composed solely of 12-inch guns.

The characteristics decided upon by the Council for the battleships, which are to be asked for from the Legislature, with authority to begin them in 1910, are now known.

The main armament consists of twelve 12-inch guns, distributed in 5 turrets: two 3-gun turrets on the middle line, one forward and the other aft, and three 2-gun turrets, of which one is on the middle line, just forward of the after turret, and the two others on the broadsides. The after double turret does not fire over the triple turret. In short, except for the introduction of the 3-gun turrets, the general arrangement is that of the *Dreadnought*. Ten guns can be fired on either broadside, and 7 ahead or astern.

For three or four years past 3-gun turrets have been talked of for projected battleships; there has been talk of adopting them in Germany, and in England, but hitherto the plan has not been put into effect. Its evident advantage is allowing the placement of the same number of guns upon a less length of ship and with less weight. The no less evident disadvantage is that in the case of any damage done the turret or its mechanisms, 3 guns are put out of action instead of 2; but that is a reason which no longer is considered important; the fear of putting too many

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eggs in one basket has gone out of fashion, and people are no longer frightened by big guns, nor by big turrets, nor by big displacements.

Still there are many difficulties in the working out of a 3-gun turret which, although not insurmountable, are none the less serious. The right and left guns when fired will disturb the train much more than is done by the guns of double turrets, since they are further out from the axis; but it is expected that this effect will be lessened by the greater inertia of the heavier turret. The loading and other mechanisms of each gun must be completely independent, from the magazine to the line of sight, so as to allow each piece to fire the 2 shots a minute that can be obtained from it on the proving ground, that is, for the turret, one shot in at least every 10 seconds; and it is not very easy to assure correct pointing in so short an interval; nevertheless, thanks to the use of apparatus for continuous pointing—inspired by those which are in use in England—it is expected to succeed in attaining these conditions. Besides this main battery, the Council has recommended a secondary battery of eighteen 5½-inch guns, distributed in 3 groups, in armoured casemates. Perhaps some 65-mm. guns will also be added for use against torpedo-boats, although the 5½-inch guns are intended for that purpose.

There will also be 4 underwater torpedo-tubes of 45-cm. (17½-inch), 2 forward and 2 aft. The protection will be the same as in the *Danton* class, except that the funnels and ventilators will be covered with 18-cm. (7½-inch) plating, as will also the casemates of the 5½-inch guns. Large capacity explosive shells with no perforating power are not to be allowed to destroy the superstructures and cause a loss of speed.

The famous anti-torpedo armour, which costs 1,000 tons of displacement in the *Danton* class, and which was adopted for them without preliminary test, is abandoned, although the question of its efficiency is no more settled than it was before. The test made at Lorient, on a caisson representing the hull of the *Mirabeau*, does not seem to have given very conclusive results, and, moreover, the system in principle was abandoned without waiting for that test. It is a decision which might advantageously have been taken 3 years earlier.

On the other hand, copying foreigners, we are to go back to the anti-torpedo nets. It is to be hoped that an arrangement of them will be found which will avoid the criticisms formerly made against them and which led to their abandonment 15 years ago.

The propelling machinery will consist of 4 turbine machines like those of the *Danton*, with 4 screws. The maximum speed will be 20 knots.

All these characteristics lead to a displacement of 22,000 tons, like that of the German *Oldenburg* class, which have nearly the same armament (twelve 30-cm. (12-inch) and fourteen 5.9-inch), superior to that of the English *Neptune*, which is only of 20,250 tons, carries ten 12-inch guns, and steams 22 knots.

In comparison with the *Danton* class, and above all, with the hybrid plan which the Council proposed in 1907, there is evidently a sensible gain in offensive power. But there is also a 4,000-ton increase of displacement and an increase of price which may be taken at 12,000,000 francs (£480,000) per ship. And this increased expense will probably not be without influence on the reception which will be given to the Council's projects by the Minister of Finance first and by Parliament afterwards.—*Le Yacht (Army and Navy Journal)*.

The following are the principal promotions and appointments which have been made: Admiral—H.R.H. Prince Henry of Prussia to be Grand Admiral and Inspector-General of the Fleet; Von Fischel to be Chief of the General Staff of the Navy; Graf von Baudissin to be Commander-in-Chief at Wilhelmshaven. Vice-Admirals—Von Holtzendorff to be Commander-in-Chief of the High-Sea Fleet; Pohl to be Commander-in-Chief of the 1st Squadron of the High-Sea Fleet; Coerper to be Inspector of the Constructor's Department of the Navy. Rear-Admirals—Pohl, von Heeringen, Capelle to be Vice-Admirals; Jacobsen to be Inspector of Naval Artillery. Kapitän zur See—Gerdes, Lans to be Rear-Admirals; Koch to be Second-in-Command of Scouting Division, with rank as Commodore; Schütz to "Nassau"; Von Rebeur-Paschwitz to "Elsass"; Wurmback to "Prinz Heinrich."—*Marineverordnungsblatt*.

Grand Admiral H.R.H. Prince Henry of Prussia handed over the command of the High-Sea Fleet to Vice-Admiral von Holtzendorff on the 1st of October, his flag being struck the same evening. His Royal Highness, on giving up the command, issued the following noteworthy Order of the Day to the Fleet:—

"Fearlessness, calm and purposeful work with the hour of trial alone in view, reticence, strict discipline, coupled with a kindly feeling on the part of superiors towards subordinates, true comradeship—these qualities must continue in the future in ever-increasing measure to distinguish the officers and men of the High-Sea Fleet."

"With this wish I to-day lay down, at the order of His Majesty the Kaiser and King, my command, a command which I was proud to hold and which I relinquish with extreme regret, but which I shall always look back upon with feelings of especial gratitude towards those of all ranks who have been serving under me."

Vice-Admiral von Holtzendorff, who succeeds Prince Henry in the command of the High-Sea Fleet, has seen some forty years' service in the Navy. His first appointment as a captain dates from 1896, when he was appointed to the command of the cruiser *Prinzess Wilhelm*, and in which he took part in the occupation of the Kiao-Chau territory. In 1900, in command of the battleship *Kurfürst Friedrich Wilhelm*, he sailed with the division composed of the four ships of the *Brandenburg* class again for China, the squadron being despatched as the consequence of the Chinese disorders of that year. In 1903-04 he was again in China, this time as Rear-Admiral Second-in-Command of the cruiser squadron in Far Eastern waters. In 1907 he was appointed to the command of the First Squadron in the High-Sea Fleet, which he now vacates, to take over the supreme command of the Fleet; he is succeeded in the command of the First Squadron by Vice-Admiral Pohl.

The Hudson-Fulton Commemoration Fêtes at New York.—Considerable surprise has been expressed that the German Navy was represented at the recent Hudson-Fulton Fêtes by only four small cruisers, viz., the *Bremen*—which was already on the American station—a sister-ship, the *Dresden*, which, at the time, was on her trials, and the two training-cruisers *Hertha* and *Victoria-Luise*. It had originally been the Kaiser's intention that his fleet should be represented by four of the armoured cruisers

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attached to the High-Sea Fleet, but the entry and training systems interfered to prevent this intention being carried out. The instruction of the recruits—both of the deck and engine-room *personnel*—is carried out on board sea-going ships between the end of September and the end of March, so that during this period the ships have a portion of their crews only partially trained. This system of recruiting—the recruits for the year invariably joining on the 1st October—consequently necessitates the retention in home waters of the ships of the High-Sea Fleet at this period of the year to allow of the disembarkation of the men who have completed their three years of service and the embarkation of the newly-joined recruits.

Steam Trials.—The new first-class battleship *Nassau* and the new first-class armoured cruiser *Blücher* were commissioned on the 1st of October at Wilhelmshaven for their trials, which have since been proceeding successfully. Full details as to the results of the trials are not yet forthcoming, but it is reported that at the full-speed trials the *Nassau* maintained a mean speed of 20·5 knots, being a knot and a half over the contract, and that the *Blücher* attained a speed of 25·33 knots, or more than 3 knots over the contract speed.

Three new second-class cruisers have been undergoing their trials with marked success. The *Emden*, on her full-power run, made an average of 25 knots, this was the contract speed; she has reciprocating engines, but is the last of her class which will be so fitted, as turbine engines are to be fitted in all her successors. Her sister-ship, the *Dresden*, which has Parsons turbines, averaged 27·5 knots on her full-speed trials, 28 knots being reached during one run in deep water; this is 3 knots over the contract speed. Another ship of the class, the *Mains*, which is still on her trials, has also recently averaged 27 knots on her full-speed run. All these vessels have a displacement of 3,600 tons, the contract speed being for 25 knots.

Cost of the Fleet.—The cost of the Fleet in commission is distributed as follows:—

1. The High-Sea Fleet.

	Marks.	1909.		1908.	
		£	s.	£	s.
Active Formation	11,779,130	= (588,956 10)		550,135 2	
16 Battleships.					
Reserve Formation	1,146,540	(57,327 0)		61,029 0	
1 Battleship.					
2 Coast-Defence Armoured Ships.					
Scouting Ships	6,062,810	(303,140 10)		281,878 14	
4 Large Cruisers.					
6 Small Cruisers.					
Tender.					
Torpedo-Vessels	4,764,195	(238,209 15)		189,138 16	
Total	23,752,675	(1,187,633 15)		1,082,181 12	

Showing an increase of 2,109,043 marks (£105,452 3s.) as compared with last year.

Germany.

2. Ships on Foreign Service.

	Marks.	1909. £ s.	1908. £ s.
The East Asian Station	3,862,878	(193,143 18)	202,516 8
1 Large Cruiser.			
3 Small Cruisers.			
4 Gunboats.			
3 River Gunboats.			
1 Special Service Steamer			
The Australian Station	337,320	(16,866 0)	12,060 0
1 Small Cruiser.			
The West African Station	409,740	(20,487 0)	22,285 16
1 Small Cruiser.			
1 Gunboat.			
The East African Station	531,120	(26,706 0)	24,492 0
2 Small Cruisers.			
The American Station	504,840	(25,242 0)	23,902 16
1 Small Cruiser.			
Constantinople	92,500	(4,625 0)	4,681 4
1 Stationaire.			
Surveying Duties	161,880	(8,094 0)	7,880 8
1 Surveying Ship.			
Total	5,903,278	(295,163 18)	297,818 12

Showing a decrease of 53,094 marks (£2,654 14s.) as compared with last year.

3. Training Ships.

Cadets' and Boys' Training Ships	3,091,800	(154,590 0)	131,080 18
Gunnery School Ships	1,807,717	(90,885 17)	80,700 6
Torpedo School Ships	1,459,650	(72,982 10)	60,712 2
Submarine Mining	661,060	(33,053 0)	30,816 0
Coast Pilotage	61,740	(3,087 0)	2,991 2
Total	7,081,967	(354,098 7)	306,300 7

Showing an increase of 955,960 marks (£47,798) as compared with last year.

4. Special Service Ships.

Imperial Yacht "Hohenzollern"	529,620	(26,481 0)	20,184 0
Surveying Ships (Home Waters)	70,080	(3,504 0)	2,212 16
Artillery Experiments	653,136	(32,656 16)	33,135 0
Torpedo Experimental Ship	937,200	(46,860 0)	37,651 4
General Experiments	229,170	(11,458 10)	10,936 4
Fishery Protection	147,750	(7,387 10)	8,429 3
Total	2,566,956	(128,347 16)	112,548 7

Showing an increase of 315,989 marks (£15,799 9s.).

5. For Special Purposes 992,115 (49,605 15) 37,172 0

Showing an increase of 248,675 marks (£12,433 15s.).

COMBINED TOTAL.

High Sea Fleet	23,752,675	(1,187,633 15)	1,082,181 12
Foreign Service	5,903,278	(295,163 18)	297,818 12
Training Ships	7,081,967	(354,098 7)	306,300 7
Special Service Ships	2,566,956	(128,347 16)	112,548 7
Special Purposes	992,115	(49,605 15)	37,172 0
Total	40,296,991	(2,014,849 11)	1,836,020 18

Showing an increase of 3,576,573 marks (£178,828 13s.) as compared with last year.

—Etat für die Verwaltung der Kaiserlichen Marine, 1909

The Naval Manœuvres.—It was originally intended that the naval manœuvres should be held in the Adriatic and Ionian waters, Taranto being used as the principal base of operations; in consequence, however, of a serious outbreak of scarlet fever at that port, at the last moment the whole arrangements were completely altered, the strategic manœuvres were given up, and the fleet was concentrated at Gaeta, the manœuvres practically resolving themselves into tactical operations on a large scale, with Gaeta as the base of the fleet. The fleet was under the command of Vice-Admiral Grenet, the Commander-in-Chief of the Mediterranean naval forces, instead of being, as has been the custom of recent years for the manœuvres, under the command of Admiral H.R.H. the Duke of Genoa, and was constituted as follows:—

1st Division.

First-class battleships.—*Regina Margherita* (Flagship of Rear-Admiral Grenet), *Benedetto Brin*, *Roma*.

Torpedo-cruiser.—*Agordat*, as repeating ship.

2nd Division (Divisione Volante).

First-class battleships.—*Regina Elena* (Flagship of Rear-Admiral Amero d'Aste), *Vittorio Emanuele*, *Napoli*.

Torpedo-cruiser.—*Coatit* as repeating ship.

3rd Division.

First-class cruisers.—*Garibaldi* (Flagship of Rear-Admiral Viale), *Varese*, *Francesco Ferruccio*, *Amalfi*.

Torpedo flotilla.—

First Torpedo Division.

Destroyers.—*Borea*, *Zeffiro*, *Aquilone*, *Espero*.

Second Torpedo Division.

Destroyers.—*Dardo*, *Lampo*, *Freccia*, *Strale*.

Third Torpedo Division.

Destroyers.—*Artigliere*, *Bersagliere*, *Lanciere*, *Granatiere*.

The manœuvres lasted from the 11th to the 21st of September, and the following programme was carried out:—

11th-13th September: Strategic exercises and night attacks by torpedo boats;

13th ,, Distribution of prizes by H. M. the King for the Annual Prize Firing;

14th ,, Prize firing by the torpedo boats;

15th ,, Landing exercises;

16th-21st ,, Tactical manœuvres;

22nd ,, Lecture at the Naval War College.

The night attacks by torpedo boats on the fleet were carried out by 12 first-class torpedo boats and 12 coast torpedo boats; on the first night the 12 destroyers attached to the fleet remained in close proximity to the main body to repel the attacking boats, but on the second night they were detached from the fleet to hunt down the hostile boats independently.

For the tactical manœuvres the fleet was divided into two opposing forces, commanded in turn by the flag-officers and respective captains of ships. In addition to the practical manœuvres at sea, war games for the officers of the fleet were held at the War School on shore under the superintendence of the Chief of the Admiralty Staff.

The King, accompanied by Admiral H.R.H. the Duke of Genoa, was present at the manœuvres, between the 11th and 17th September, on board the armoured cruiser *Pisa*. On the 15th September he went on

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board the battleship *Vittorio Emanuele III.*, which bears his name, and presented a battle flag.

A Press bureau was this year established on board the transport *Volta*, on board which ship also Vice-Admiral Bettolo, the Chief of the Admiralty General Staff, with his staff, had also embarked.

The Annual Prize Firing.—This year's prize-firing took place as usual in Aranci Bay between the 23rd July and 12th August. The umpires were Rear-Admiral Avallone, as Chief, with two Captains, two Commanders, and six Captain-Lieutenants as his assistants. The practice consisted of individual firing by the gun-layers, director-firing by individual ships and collective firing by divisions of three ships. At the gun-layers' practice, from 2 to 4 rounds, with practice ammunition, were fired per gun from the heavy and medium calibre guns at a range of from 2,400 to 4,000 yards against an anchored 21 feet by 55 feet target, and from the light guns 6 rounds per gun with practice ammunition at a range of from 1,250 to 1,600 yards, against an anchored 9 feet by 30 target. The speed for passing the target for the large ships was fixed at 14 knots, for the torpedo craft 20 knots. The only shots counted were those that struck the target. The director-firing was carried out in two series, in the first with all guns down to the 4·7-inch inclusive, against a 21-ft. by 75 canvas target, erected on the hull of a torpedo boat, which was towed at a speed of 20 knots at a range of 7,000 yards; in the second, the firing was from the medium-calibre guns, the target being towed at a speed of 14 knots. The divisional firing was carried out under similar conditions, the ships being either in single line ahead or quarter column, two cables apart from each other.

The Points of Merit were as follows:—

Names of Ships taking part in the Competition.	Gunlayers Test.		Director Firing.	
	Heavy and Medium Calibre Guns.	Light Guns.	Single Ships.	Divisional.
Battleships and Cruisers.				
Regina Margherita (Flagship of Commander in Chief)	63	43	6	33
Benedetto Brin	57	59	33	
Regina Elena (Flagship of Second-in-Command)	54	27	0	
Vittorio Emanuele	50	29	35	19
Napoli	83	63	15	
Garibaldi (Flagship of Cruiser Division)	90	89	25	
Varese	61	71	0	24
Francesco Ferruccio	91	45	28	
Torpedo Vessels.				
Agordat	37			
Costa	22	32		
Espero	—	47		
Borea	41			
Aquilone	26			
Lanciere	55			
Granatiere	25			

*The *Vittorio Emanuele* fired two rounds (both hits) from her two 8 inch turret guns in 18 seconds.

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The director-firing compares badly this year with last, a fact due in a great measure to the more difficult conditions imposed this year, and also to the fact that all the gunnery officers of the ships had been newly appointed.

The presentation of the prizes was made by the King on the 18th, on board the *Vittorio Emanuele III.*; the Annual Cup, given by Admiral H.R.H. the Duke of Genoa for the highest gun-layers' points, being carried off by the *Francesco Ferruccio*; the *Vittorio Emanuele* won the cup presented by the Duke of the Abruzzi for the single ship director firing; the 1st Division carried off the Cup presented by the Minister of Marine for the divisional director-firing, while the *Garibaldi* and *Lanciere* received the two champion prizes for light guns.

The King's Cup was won by the division consisting of the cruisers *Garibaldi*, *Francesco Ferruccio*, and *Varese*, which carried out a series of collective firing in the presence of the King at the end of the manoeuvres against a 21-foot by 75-foot canvas target on a torpedo boat, which was towed at a speed of 20 knots at a range of 7,000 yards; out of 109 shots fired from all three ships, there were 78 hits, of which 21 struck the hull of the boat and 57 the canvas target, the percentage of hits being thus 71.5.

The Minister of Marine has this year given a large order to Messrs. Barr and Stroud for their range-finders.

Speed Trials.—The new first-class battleship *Napoli*, at her three hours' full-speed trial, made an average of 22.5 knots, with the engines developing 19,700-I.H.P., and making 122 revolutions; she has a displacement of 12,500 tons, and steam is provided by 22 Babcock and Wilcox water-tube boilers. The new first-class battleship *Roma* has also completed her trials successfully; at her three hours' full-speed trial she averaged 22 knots, with her engines developing 21,000-I.H.P., steam being supplied by 18 Babcock and Wilcox water-tube boilers.

The new first-class armoured cruiser *Pisa* has also successfully completed her trials; at her three hours' forced-draught trial on the 3rd July, she averaged a speed of 23.5 knots, with the engines developing 20,812-I.H.P. and a coal consumption of 819 gr. (1 lb. 10 oz.) per indicated horse-power per hour, and during a six hours' run she maintained a speed of 23.85 knots, or nearly 2 knots over the contract. She is provided with 22 Belleville water-tube boilers.

A sister-ship of the *Pisa*, the *Amalfi*, has also completed her trials; at her three hours' full-speed run with the engines developing 20,812-I.H.P. and a coal consumption of 819 gr. (1 lb. 10 oz.) per indicated horse-power per hour she maintained a speed of 23.64 knots. At her economical coal consumption trial with 8 boilers alight, the engines developing 2,447-I.H.P., and making 65 revolutions, she maintained a speed of 11 knots with a coal consumption of 806 gr. (1 lb. 9 oz.) per indicated horse-power per hour, and a total consumption of 1,972 kg. (2 tons 400 lbs.); she has thus a steaming radius of 11,000 miles at 10 knots speed, as her total coal stowage is 2,100 tons. Steam is supplied by 22 Belleville boilers. *Marine Rundschau*, *Rivista Marittima*, and *Revue Maritime*.

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Torpedo Experiments against the "Francesco Morosini."—To test the actual result of torpedo fire against a battleship, the Italian Navy has been making experiments with the 11,000-ton battleship *Francesco Morosini*, which has been lately struck out of the active list. Advantage was also to be taken of the experiment to test some new theories as to the best method of construction of a vessel's underwater framing and arrangement of compartments in order to best resist torpedo attack. The attack was to be made by a standard torpedo with a normal charge, and the explosion was to be effected, as far as possible, under the usual conditions of an ordinary hit. A frame cradle was attached to the vessel to carry the torpedo, which was placed at right angles to the line of keel, and with its nose touching the vessel. The regulation type and quantity of explosive were adopted, and the reservoir chamber of the torpedo was filled with compressed air of the pressure that would theoretically remain after a run of normal length. The depth below the waterline was three metres. The effect of the explosion above water was not more than had been expected, but it was very evident that considerable damage had been done to the vessel's hull, as she quietly took a list and, swerving over on her side, went to the bottom, where she still remains, while every day she settles still more. An examination of the damage has been made as far as possible by divers, and it appears that there is a hole of over fifty square metres in area, which is considerably more than had been expected. It is considered that the result of this experiment will be the building by Italy of a new type of vessel, very swift and with a main armament consisting of torpedoes, torpedo tubes being fitted in a very much larger quantity than in any existing vessel.—*Army and Navy Journal*.

MILITARY NOTES.

The following are the principal appointments which have been made:—

Lieut.-General Sir C. Tucker, G.C.V.O., K.C.B., to be Colonel of the Cheshire Regiment.

Colonel—W. Douglas, C.B., D.S.O., to command of 14th Infantry Brigade (5th Division, Ireland).

Indian Army.—Major-Generals—A. L. Playfair, Indian Army, to be Colonel of the 97th Deccan Infantry; Sir D. Haig, K.C.V.O., C.B., Chief of the Staff in India, to have temporary rank as Lieut.-General while so employed; B. T. Mahon, C.B., D.S.O., to command of 8th (Lucknow) Division.

Regimental Distinctions.—Army Orders (3rd November) state that the King has approved of the award of the undermentioned honorary distinctions to be borne on the colours, or appointments, of the following regiments;—

Royal Scots (Lothian Regiment)—Havannah.

Buffa (East Kent Regiment)—Guadaloupe, 1759.

King's own (Royal Lancaster Regiment)—Guadaloupe, 1759; St. Lucia, 1778.

Home.

- Northumberland Fusiliers—St. Lucia, 1778.
 Royal Warwickshire Regiment—Martinique, 1794.
 Norfolk Regiment—Havannah; Martinique, 1794.
 East Yorkshire Regiment—Martinique, 1762; 1794; Havannah; St. Lucia, 1778.
 Leicestershire Regiment—Martinique, 1762; Havannah.
 Royal Scots Fusiliers—Martinique, 1794.
 Cheshire Regiment—Martinique, 1762; Havannah.
 Royal Inniskilling Fusiliers—Martinique, 1762; Havannah; St. Lucia, 1778.
 Gloucestershire Regiment—Guadaloupe, 1759; Martinique, 1762; Havannah; St. Lucia, 1778.
 East Surrey Regiment—Martinique, 1794.
 Duke of Cornwall's L.I.—St. Lucia, 1778.
 Border Regiment—Havannah; St. Lucia, 1778.
 Royal Sussex Regiment—Martinique, 1762; Havannah; St. Lucia, 1778.
 South Staffordshire Regiment—Guadaloupe, 1759; Martinique, 1762.
 Dorsetshire Regiment—Martinique, 1794.
 Prince of Wales's Volunteers (South Lancashire Regiment)—Martinique, 1762; Havannah; St. Lucia, 1778.
 Welsh Regiment—Martinique, 1762.
 Black Watch (Royal Highlanders)—Guadaloupe, 1759; Martinique, 1762; Havannah.
 Oxfordshire and Buckinghamshire L.I.—Martinique, 1762; 1794; Havannah.
 Essex Regiment—Havannah.
 Northamptonshire Regiment—Martinique, 1762; 1794; Havannah.
 Princess Charlotte of Wales's (Royal Berkshire Regiment)—St. Lucia, 1778.
 King's Royal Rifle Corps—Martinique, 1762; Havannah.
 Manchester Regiment—Guadaloupe, 1759.
 Prince of Wales's (North Staffordshire Regiment)—Guadaloupe, 1759; Martinique, 1794.
 York and Lancaster Regiment—Guadaloupe, 1759; Martinique, 1794.
 His Majesty has also approved of the addition of the dates stated below to the honorary distinctions enumerated (which are already borne on the colours or appointments of the regiments concerned), in order to indicate for what particular operations these distinctions have been granted:—
 Royal Scots (Lothian Regiment)—St. Lucia, 1803.
 Royal Fusiliers (City of London Regiment)—Martinique, 1809.
 King's (Liverpool Regiment)—Martinique, 1809.
 Prince Albert's (Somersetshire L.I.)—Martinique, 1809.
 East Yorkshire Regiment—Martinique, 1809; Guadaloupe, 1810.
 Royal Welch Fusiliers—Martinique, 1809.
 King's Own Scottish Borderers—Martinique, 1809.
 Cameronians (Scottish Rifles)—Martinique, 1809; Guadaloupe, 1810.
 Royal Inniskilling Fusiliers—St. Lucia, 1796.
 East Surrey Regiment—Guadaloupe, 1810.
 King's (Shropshire L.I.)—St. Lucia, 1796.

King's Royal Rifle Corps—Martinique, 1809.

Manchester Regiment—Martinique, 1809; Guadaloupe, 1810.

Prince of Wales's (North Staffordshire Regiment)—St. Lucia, 1893.

West India Regiment—Martinique, 1809; Guadaloupe, 1810.

In any case where a regiment has been awarded the same distinction, but with different dates, it will bear on its colours or appointments one distinction only with the dates.

Requirements for an Automatic Rifle.—According to *The Times*, the following conditions have been laid down for the guidance of inventors and others who may wish to submit to the War Office a design for an automatic rifle:—

The rifle should be as simple, strong, and compact as possible, and the mechanism should be well protected from the entrance of sand, rain or dirt, and should not be liable to derangement due to rough usage, exposure, or fouling. Cartridges may be rimless, and as regards ballistics the range for a maximum height of trajectory of 54 feet must not be less than 800 yards. The weight of the bullet, which should be pointed, must not be less than 150, or more than 180 grains, and the calibre must be not less than .27-inch or more than .28-inch, the working pressure not exceeding 21 tons to the square inch at 80 degrees Fahr. The rifle must be as light as possible, and in any case it is not to exceed 94 lbs. with magazine empty and without the bayonet. It must be capable of being used either as an automatic-loading or as a magazine weapon, the change from one to the other being rapidly and easily effected, and the bayonet must be attached to the fore end and not to the barrel.

Rifles submitted for consideration under the above conditions must reach the Director of Artillery at the War Office not later than 1st May, 1910, and must be accompanied by at least 300 rounds of ammunition for the purpose of a preliminary trial.

Mosquito Campaign in West Africa by Means of Traps.—In the *Archiven für Schiffs-und Tropen-Hygiene* (Band XIII., Heft 20, 1909), Dr. Külz describes an ingenious method which is employed in Conakry, French Guinea, for the destruction of mosquitoes. Dr. Blin, senior medical officer of the settlement, had by careful arrangements succeeded in destroying all the mosquito larvae in the breeding places, but was greatly annoyed by mosquitoes which were blown into the settlement from neighbouring swamps. He, however, noticed that these mosquitoes took refuge during the heat of the day in land-crab holes, or hollows under the mangrove roots, protected from sun and wind. He, therefore, hit on the idea of making a number of holes, which he calls "trous-pièges," in order to trap the insects. Each hole for a trap is about 16 inches long, its axis making an acute angle with the surface of the soil; the opening is directed away from the prevailing wind, and not exposed to sunlight, shady spots under trees or bushes giving the best results. Mosquitoes begin to take shelter in these holes about 8 a.m., and remain till about 4 p.m. Destruction of the insects is begun about 2 p.m. Gangs of six natives are employed, each of whom carries a stick about 5 feet long, having a bunch of lighted tow or some absorbent material, saturated with paraffin oil, fixed at its end.

Home.

The bearer rapidly passes from hole to hole and thrusts the blazing torch into each. A torch lasts about ten minutes, and six trained men, using 30 torches, can burn out 600 holes in 1½ to 2 hours, with an expenditure of about five pints of oil. The holes should be about 15 to 20 feet apart; if there is much vegetation, they may be placed somewhat closer. After ten to twelve days' use the soil absorbs some of the paraffin oil, the odour of which prevents the insects from entering the traps, and fresh holes must then be dug. One native, after a little practice, can dig 100 of these holes a day.

In order to get some idea of the value of this procedure, Dr. Blin counted the mosquitoes found in ten holes daily for fifteen days; the total number was 11,700. This was during the mosquito season.

The "trous-pièges" can also be used to capture mosquitoes for studying the prevalence of different species and other purposes. To effect this a muslin cylinder large enough to embrace the opening of the hole, with one end fastened to a glass jar, must be provided. The muslin cylinder is dropped over the opening, and the insects driven into the jar by pushing a fine twig into the trap-hole. A string can then be tied round the muslin to keep them imprisoned.

Dr. Blin has applied the same idea to use in the interior of houses. He constructed a pyramidal wooden box with side walls 16 inches in length, closed at the smaller end, which was 4 inches by 2½ inches in size, and open at the larger, 8 inches by 5 inches. A sliding door was provided to close the entrance. The outer surface of the box was painted dark grey and the inner black. In the morning Dr. Blin placed this box in a dark part of a room, where it was not exposed to draughts. About 3 p.m. he closed the door and pushed a piece of smouldering brown paper on the lid of a tin into the box, which is sufficient to destroy the mosquitoes.—*Contributed by the General Staff.*

Heavy-Freight Automobile Competition, 1909.—In the Military Notes of the May number of the JOURNAL, the rules for, and the route to be covered by, heavy-freight automobiles, in the competition organised by the Military Authorities to take place in that month, were given, and we now give the results.

The competition took place under the superintendence of a detachment of communication troops between the 26th April and the 21st May, the route being from Berlin to Stuttgart and back.

The seventeen automobile vehicles which took part belonged to twelve different firms, of which only three (Argus, Erhardt and Soest) competed for a Government subsidy, their competing in the race by the others was due to a desire to avail themselves of a good opportunity for testing some modification or improvement in their matériel and of proving the superiority of their workmanship.

The distance run was longer than in preceding years—2,352·6 kilometres (1,461½ miles); the competition lasted twenty-seven days, twenty of which were spent on the road. One hour each day before the vehicles started was all the time allowed for getting them ready (replenishing their store of combustible, lubrication, etc.), any time spent over and above this was counted in the length of time on the road.

Germany

The course selected ran through various kinds of country, level plains, hilly and mountainous regions, with long and stiff gradients up to 13 in 100; some of the roads were even under repair. The 1,461½ miles were run in 218 hours, which gives a mean speed of 6 miles 1,300 yards per hour, the maximum being 7½ miles, and the minimum 5 miles 500 yards. The bad state of the roads, the local police regulations, and the organisation at the same time over part of the route of another competition by the Imperial Automobile Club, explains why the speed reached remained, relatively speaking, low.

The mean day's stage was 73 miles, 200 yards; the longest from Stuttgart to Tauberbischofsheim, over bad roads, was 87 miles, 500 yards.

The trains and single wagons were formed into two columns, which followed at a distance of about 1,000 yards, with a distance of between 10 to 20 yards between the vehicles.

The greater part of the time, however, at least after starting from Frankfort, this order was not, as a matter of fact, adhered to, because it was often necessary, on account of the dust, to increase the distance apart to 200 yards or even more. The result was, naturally, a considerable increase in the length of the columns, which caused one of the great advantages of mechanical-traction columns to be lost, that of having a column of medium length for transporting the same weights.

The weight of the vehicles varied from 3 tons 17 cwt. 3 gr., (Mulag) to 4 tons 7 cwt. 2 qrs. (Dürkopp), the mean gauge being 5 feet 7 inches, minimum 5 feet 1 inch, the maximum 5 feet 11 inches. All the motors were of at least 35-H.P., although this condition was only laid down by the military administration to start from 1st April, 1910. The consumption of combustibles varied considerably; the lowest was that of the Gaggenau firm, 249½ gallons of benzine for the 1,461½ miles; that is less than 880385 per 1,094 yards for a useful load of 6 tons, which puts the cost of transport of a ton at 1½ centimes per kilometre.

All the vehicles, with the exception of that of the Soest firm, which withdrew from the competition on the first day, returned to Berlin on the 21st May.

This excellent result shows that heavy freight-carrying automobiles are fit to be employed for victualling work in time of war, under all conditions. The military authorities have deserved well of the automobile industry by their system of subsidies—5,000 francs (£200) down and 1,250 francs (£50) annual contribution for the expense of upkeep per vehicle. It is thanks to this assistance that the employment of mechanical traction has commenced to extend in Germany, and will only develop more and more. The Army will, moreover, be the first to benefit by it, and in case of mobilisation will by the end of the present year have at its disposal at least 300 subsidised motor wagons.

The Technical Military Academy at Berlin.—The provisional regulations of 26th April, 1906, for the work and course of instruction at the Technical Military Academy at Berlin have been replaced by the new definite regulations of 21st June, 1909. The Academy will, as in the past, comprise three divisions: the "Armament" division, the "Engineer" division, and the division of "Communications." Each of these divisions

Germany.

will carry for the future four years of study instead of three, on the lines of the Superior Civil Technical School, where the time of study is spread over eight sessions of six months. The greater number of the officers leave the Academy at the end of the second year; the superior instruction of the third and fourth years is only given to a small number of officers according to their aptitude and according to the needs of the Military Administration. In addition, to each of the year's study of the "Armament" division is attached a foot-artillery course.

The total number of officers detailed for the first two years' course with the "Armament" and "Communications" divisions is not to exceed 166, that for the last two years 50.

Every officer who has followed the course at the Academy for two years is noted by the Director and recommended according to his aptitude for the third and fourth year course, and after that to fulfil the duties which require expert technical knowledge (Experimental Committees, Engineer Committees and detachment for experiments with the "Communication" troops, etc.). Leave is granted annually to 6 officers of the fourth year for tours for study of four to six weeks in Germany, Europe, or the United States.

The other provisions of the former regulations are retained in their entirety.—*Revue Militaire des Armées Etrangères.*

Numbers and Distribution of the Officers of the Reserve and Landwehr in the German Army.—The *Militär-Zeitung* of the 10th July, 1909, gives a detailed return by arm, by Corps, and by rank of the Reserve officers of the Prussian Army. There are altogether 16,077 Reserve officers thus divided:—

	Field Officers.	Captains.	Lieutenants.	Sub-Lieutenants.	Total
Infantry of the Guard ...	2	89	103	455	651
Infantry of the Line ...	—	339	719	6,131	7,189
Chasseur and Rifle Battalions ...	—	43	75	274	392
Machine Gun Detachments ...	—	1	7	30	38
Cavalry of the Guard ...	—	52	50	70	172
Cavalry of the Line ...	3	264	306	1,476	2,049
Field Artillery ...	—	142	207	2,842	3,191
Foot Artillery ...	—	22	51	474	547
Pioneers ...	—	23	65	339	427
Railway Regiment ...	—	15	30	293	338
Telegraph Battalion ...	—	21	54	103	178
Balloon Battalion ...	—	2	1	1	4
Automobile Detachment ...	—	2	8	41	51
Train ...	—	33	108	709	850
Total ...	5	1,048	1,786	13,238	16,077

The distribution of officers between the different Corps is very variable. Thus, the infantry regiment No. 39 (Düsseldorf), the best provided for, possesses 89 reserve officers, whilst the worst off, the regiment No. 176 (Thorn) only counts 19. In the Chasseur battalions, the numbers vary from 40 in the battalion No. 7 (Bückeburg) to 21 in the battalion No. 4 (Bitché). In the cavalry, one passes from 52 officers in the Hussar

Germany.

Regiment No. 7 (Bour) to 1 officer in the regiment of Chasseurs à Cheval No. 5 (Mulhausen). In the field artillery, very well provided on the whole, we find 78 officers in the regiment No. 10 (Hannover) and only 12 in the regiment No. 84 (Metz). Lastly, the foot artillery shows 52 in the regiment No. 2 (Danzig, Swinemünde, Pillau) and 17 in the regiment No. 8 (Metz).

It may not be without interest, therefore, if we complete these data by the following tables, drawn from the different lists of the German Army for 1909:—

Total Number of Reserve Officers in the German Army.

	Prussia	Saxony	Wurtemberg	Bavaria	Totals
Infantry, Chasseurs	8,170	808	506	1,263	10,847
Cavalry	2,221	234	108	1,717	2,794
Field Artillery	3,191	291	139	398	4,019
Foot Artillery	547	21		106	674
Pioneers and Communi-					
cation Train	998	50	23	112	1,183
Train	850	49	32	104	1,035
Totals ...	16,077	1,453	808	2,154	20,492

Total Number of Officers of the Landwehr of the German Army.

	Prussia.	Saxony.	Wurtemberg.	Bavaria.	Totals.
Infantry, Chasseurs ...	5,341	623	349	671	6,984
Cavalry ...	831	56	40	60	987
Field Artillery ...	1,148	83	68	145	1,444
Foot Artillery ...	199	26	3	64	293
Pioneers and Commu- nication Train ...	303	39	14	54	410
Train ...	313	27	27	73	440
Totals ...	8,135	854	501	1,068	10,558

—Revue Militaire des Armées Etrangères

Recruiting Statistics for 1907.—The number of young men of the class of 1887 (1907) inscribed on the rolls was 377,879. Taking into account men adjourned from previous classes, who number 122,720, we get a total of 500,599 inscripts, who have been classed as follows:—

Struck off for various causes	13,244
Rejected as unfit	121,986
Adjourned	128,351
Failed to report themselves	43,749
Appointed to 1st Category (Active Army)	97,381
2nd	2
3rd (Territorial Militia)	95,886
Total	500,589

Germany.

Of the 97,381 men selected for the Active Army, 75,979 have joined their Corps and been distributed as follows:—

Infantry	47,898
Cavalry	7,616
Artillery	13,643
Engineers	3,640
Royal Carabineers	1,230
Hospital and Commissariat Companies	1,952
Total	75,979

The difference of 21,402 men between the 97,381 men allotted to the Active Army and the 75,979 actually incorporated in the ranks, is due to the fact that a certain number of men were already serving under the Colours at the time of the sitting of the Recruiting Board, to the number of students authorised to delay their period of service, to the withdrawal of men incorporated in the Customs' service, and to the number of *inscripts* residing abroad, etc.

Under the Education Return, the *inscripts* for the Active Army are classified as follows:—

69,961 or 71·8 per cent. able to read and write; 653 or 0·67 per cent. able to read only;

26,767 or 27·49 per cent. unable to read or write.

—*Bulletin de la Presse et de la Bibliographie Militaires.*

Italy.

Re-engagement of Corporals and Privates.—In view of the probable adoption of two years' service, the Italian Parliament has been considering the consolidation of the lower ranks of the Army, and the Act published on the 19th of July last fixes the conditions for the re-engagement of corporals and soldiers.

This Act lays down:—

1. Re-engagement for a year without a bounty for corporals of all arms who, after their term of normal service, request to remain under the Colours in view of competing for the rank of non-commissioned officer, and for soldiers who wish to compete later on for one of the employments giving a right to re-engagement with a bounty;

2. The re-engagement for three years with a bounty for corporals and soldiers of the 1st Class of the disciplinary companies, the penitentiary establishments, musicians, corporal-farriers, etc., to the extent of three successive re-engagements and without limit of age.

This bounty is annual; it amounts to 200 francs (£8) for the first re-engagement, and for 300 francs (£12) for the two following.

The Carabineers, whether non-commissioned officers or not, are admitted to share in these arrangements.

Every re-engaged promoted non-commissioned officer passes under the law of 19th July, 1906, modified in 1908, on to the list of non-commissioned officers.—*Revue Militaire des Armées Etrangères.*

Russian Recruiting Statistics.—The height of about 27 per cent. of the Russian recruits in 1907-08 was 5 feet 6½ inches; 26 per cent., 5 feet 4½ inches; 18 per cent., 5 feet 8½ inches; 16 per cent., 5 feet 3 inches; less than 1 per cent., 5 feet 1 inch. There were 1,245 recruits whose height was 6 feet 1½ inches; 123 of 6 feet 3½ inches; and 10 of 6 feet 5 inches. Over 37 per cent. of the recruits were illiterate. Of 275,000 recruits in 1907 who were able to read or write, only about 6,000 had passed the medium of higher standards of education, 35,000 the lower standard, 180,000 could read and write, 54,000 could only read. Out of a total of 456,000 recruits in 1908, 380,000 were Russians; there were 30,000 Poles, 18,000 Jews, 12,000 Finns, 8,000 Tartars, 6,000 Bashkirs, and 5,000 Germans recruited in the Russian Army in 1907.

Courier Corps.—There is a branch of the Russian Army known as the Courier Corps, and sections of it are attached during war to the Staff of the Commander-in-Chief of the army in the field and to each army corps. The Commander-in-Chief is supplied with 8 officers and 12 non-commissioned officers, and each army corps takes half that number. Their duties are the carrying of important despatches, and as orderlies to general officers commanding. Only highly educated, experienced and trustworthy officers and non-commissioned officers are enlisted into this corps, and when on duty each courier is supplied with a pass, which allows him the use of horses, drivers, and carriages without payment. All station commandants are ordered to do everything in their power to assist these couriers in their journeys, and depôts of post horses, drivers, and carriages are stationed on all roads leading from Army Headquarters to the nearest railway station; these horses and vehicles are reserved solely for the use of the Courier Corps.

Aviation in Russia.—In Russia there is now being finished a dirigible balloon for which the inventor, M. Kostovitch, claims great things. Conceived before the Zeppelin airship, the Russian dirigible also has an absolutely rigid body, the framework being made of a special material invented by the designer, and this he asserts to be far superior to wood or aluminium. The main propeller shaft runs through the centre of the vessel, and for this arrangement great efficiency is claimed. The Kostovitch airship is about 200 feet long and 40 feet in diameter, with cone-shaped ends. The rudder is mounted in front and the propeller in the rear. Two platforms underneath the body provide accommodation for the crew, engines and stores. So light is the material employed that the vessel will, it is said, have a much greater lifting power than any other rigid type of vessel. At the same time, the outer shell has greater strength, according to the inventor. Side planes are fitted for the purpose of dynamic flight. By a secret device it is said that gas can be rapidly pumped from the balloon chambers and stored in other vessels under pressure. The interior of the ship is then filled with air, and thus the vessel at once becomes of the heavier-than-air type. Neither gas nor ballast is sacrificed by this change, and it can be effected very quickly. Thus, when in the air and travelling at high speed, the vessel can be converted into a flying machine. When buoyancy is required the

Russia.

gas is restored to the balloon, and the vessel becomes lighter than air. The engine is also the invention of M. Kostovitch. It is of the eight cylinder type, and can develop up to 150-H.P., which is deemed sufficient to give speeds up to sixty miles an hour. M. Kostovitch is particularly anxious to get the matter taken up in England, as he states that this type of vessel is best suited for her requirements.—*Army and Navy Journal*.

Creation of a Superior School of Gymnastics and Fencing for Officers.

—Founded by the *Prikaze* of the 13th August of this year, this School has for its object: 1. To train officer-instructors, practical and theoretical, for the Army and the School itself; 2. To establish logical and uniform methods for the teaching of gymnastics and fencing in all branches of the Army; 3. To study and to carry out practical experiments in all branches and with all inventions in the domain of training and physical development in Russia and abroad.

The School is placed under the orders of the General Commanding the Military District of St. Petersburg, who is the Inspector-General. It comprises a permanent staff and a *personnel* of officer-students. The permanent staff is comprised of:—

- a. The Commandant of the School, a field officer appointed by the Minister with the assent of the Inspector-General, and responsible directly to this latter; he is on the same footing as the Commandant of a regiment;
- b. The officer-instructors, who are selected by the Commandant of the School among the subaltern officers who have given proofs of special proficiency in gymnastics and fencing; they are under the direct orders of the Commandant of the School, and are on the same footing as Commanders of Companies; they wear the uniform of their Corps, on the roster of which they continue to count.
- c. The Professors: 1 Professor and 4 Assist-Professors for gymnastics, 1 Professor and 4 Assist-Professors for fencing, 1 Professor of statistics and history of physical training, 1 Professor of anatomy, physiology and hygiene; at first, these Professors, selected by the Commandant of the School, may be civilians, and even foreigners, of established reputation; gradually, however, these positions will be filled by old pupils of the School;
- d. The Medical Officer;
- e. The Officer Commanding the detachment of soldiers.

The officer-pupils are recruited from among the subaltern officers (up to the grade of Second-Captain, inclusive) of all arms, in the proportion of two per Army Corps, of three per Military District for the Corps not included in the Army Corps, of two for the Cossacks of the Don: the total effective being 100 officers. These officers are to be volunteers, as far as possible, well reported on, in perfect health, 30 years of age or more, and who have served in a unit for at least three years. At the end of the course, they must serve for two years at least in a regiment or as professor at the School. Those among them who have shown marked aptitude can be retained at the School for a year in the capacity of instructors, so as to prepare themselves for the position of professor; but their number is not to exceed six.

Russia.

The duration of the course is ten months, and is divided into two terms: the winter term, from the 1st October to 31st May; the summer from the 1st June to the 1st August, which is passed in camp.

The theoretical part of the instruction includes anatomy, physiology, hygiene, statistics and history of physical training; the practical part includes gymnastics, as applied to the physical training of troops, and also includes physical work in the gymnasium, with the object of giving the instructors the necessary suppleness, agility and confidence, field gymnastics, outdoor exercises and games, fencing, and sword and bayonet exercises.

The programme of the course is settled by the "Committee for the Training of the Troops," and approved by the Inspector-General of the School and the Minister of War.

A detachment of soldiers is attached to the School provisionally; the School will at first be located in a private building, but it will have at its disposal the *Salle d'Escrime* and the other analogous establishments of the Guard Corps and of the 1st St. Petersburg district.

The creation and organisation of this new School for perfecting the training of officers shows the interest now taken at Headquarters in the development of corporal exercises and the physical training of the Army.—*Revue Militaire des Armées Etrangères.*

Composition and Organisation of the Expeditionary Force at Spain. Melilla.—In consequence of the incident of the 9th July and

the battles which followed, the Spanish Government was compelled to send to Melilla successive reinforcements, which had the result of placing at the disposal of General Marina an effective strength of nearly 35,000 men.

The operations relating to the despatch of these divers reinforcements were carried out with a rapidity and method which merit some notice.

Mobilisation of the Chasseur Brigades.—On the 9th July, the day when the news of the fresh aggressive movements of the Rifians was received, the order was given for the mobilisation of the brigade of Chasseurs stationed in Catalonia (recalling to active service the number of reservists necessary to raise the effective strength of each battalion from about 380 to 800), and it was further decided to add to this brigade:—

- 3 Mountain Batteries;
- 1 Squadron of Cavalry;
- 1 Company of Sappers;
- 2 Telegraph Companies;

1 Military Administration Section;

1 Mountain Ambulance Section.

In spite of the troubles which broke out at Barcelona on account of the war, the mixed brigade commenced its embarkation on the 12th July and by the 20th the whole was concentrated at Melilla.

• In its turn the Chasseur Brigade of New Castile was mobilised under similar conditions by an order of the 19th July, and its conveyance to Malaga, then to Melilla, took place between the 21st and the 27th July. Finally, the Chasseur Brigade of Andalusia, which received the order to mobilise on the evening of the 27th July, was ready to embark on the 29th and was entirely concentrated at Melilla on the 2nd August.

Spain.

Mobilisation of the First Division.—The battle of the 27th July having made the necessity evident of still further strengthening the Expeditionary Corps at Melilla, the Government decided to send out a complete division. The infantry for this division was constituted from two brigades, viz., that of Vittoria, belonging to the 12th Division, and that of Oviedo-Léon belonging to the 13th Division. Each of the four regiments mobilised two battalions, raised to an effective of about 1,000 men each by calling out the reservists, and drawing upon men serving in other regiments. In addition to these eight battalions, the division comprises:—

3 Field Batteries armed with the Schneider-Canet 7.5 cm. Q.F. gun (14.3 pounders), drawn from the 2nd Regiment of Field Artillery, in garrison at Vittoria;

2 Two-gun Machine Gun Sections;

1 Regiment of Cavalry (the Chasseur Regiment, Alfonso XII., stationed at Vittoria), formed of 2 squadrons of 160 horses each;

1 Sapper Company, 125 men strong;

1 Telegraph Company, 100 men strong;

1 Administration Company;

1 Hospital Company;

in all, an effective of about 10,000 men. The division is under the command of General Sotomayor.

The operations commenced on the 28th July, and the division was transported to Melilla between the 3rd and 9th August.

Three days later there arrived at Melilla some cavalry reinforcements, formed by the Princess's Hussar Regiment, with a strength of 3 squadrons of 100 horses each.

Summing up, in the space of a month, the Spanish troops detached to Melilla, which, under normal circumstances, reach an effective of from 6,000 to 7,000 men, have been raised to a total strength of from 34,000 to 35,000 men, made up of: 33 battalions of infantry; 9 squadrons, 18 batteries, and the various technical services.

Different Services of the Expeditionary Corps.—In addition to the troops forming part of the organic units (the Chasseur Brigade, 1st Division, etc.), the Government placed at the disposal of General Marina all the additional elements necessary for an active campaign:—

Communication Troops.—A Balloon Company, with two balloons and a hydrogen park; a field wireless telegraphy section (*matériel* furnished by a German firm); a photographic section; and two sections of railway sappers.

Hospital and Sanitary Service.—Independently of the ambulances attached to each of the Chasseur brigades and to the 1st Division, the Expeditionary Corps disposes of an important reserve of *matériel* and medical stores which have been collected at Melilla; of apparatus for the sterilisation and ozonation of water, of a locomobile disinfecting stove, and a portable incinerating oven, etc.

Administrative Services.—To provide for the necessities of reprovisioning the army of operations at Melilla, there were organised (by Royal Decree of 11th August) two mounted military administration companies: one for field battery, the other for convoy.

The *Field Bakery Company*, subdivided into 3 equal sections, disposing each of 2 portable field ovens, has an effective strength of 5 officers, 190 men, 135 horses, and 36 carts.

The *Convoy Company*, also subdivided into 3 sections, has a strength of 5 officers, 160 men, 150 horses, and 36 carts. Another division was also held in readiness, which would be placed under the orders of General Ampudia, who commands the 14th Division at Corunna, and who is one of the youngest Generals of division in the Spanish Army.—*Revue Militaire des Armées Étrangères*.

Effective Strength of the Cavalry.—According to the last Report of the Military Department, the effective strength of the cavalry since the beginning of the new century has varied as follows: in 1901, 4,641 men; 1906, 5,162 men; 1909, 5,113 men. After a relatively-speaking considerable increase, the numbers now show a very small diminution. This does not hold good as regards the rest of the Army, which, from an effective strength of 151,766 men in 1901, fell to 142,000 in 1906, and then to 138,798 men in 1909, a diminution in round numbers of 13,000 men. This result appears to be due to a greatly increased strictness in the examination of the recruits, and consequently it is now proposed to relax the regulations somewhat.

The Remounts of the Federal Army.—From reliable information as to her resources, Switzerland can count upon the following numbers for the remount service of the Army:—

According to the statistics of 1908, there are at present in the country 6,630 horses fit for the use of officers, 6,444 for non-commissioned officers, 22,558 horses for light and 39,193 for ordinary draught; a total of 74,825 horses fully fit for military service. In addition, there are 18,511 heavy draught horses, which can be utilised in case of necessity, and 2,231 mules fit for mountain service.

At the present time there are at the remount depôts 772 horses, principally intended for the use of officers. In addition the Government possesses 11,237 cavalry and artillery horses *en dépôt* with the farmers or ready for riders, who would mount them when called out or in case of mobilisation.—*Revue de Cavalerie*.

Target Indicator.—The Swiss Artillery have recently adopted a reflector to indicate on manœuvres the target aimed at by them. It consists of a powerful acetylene lamp mounted on a tripod three feet high, with a hollow cylinder eighteen or twenty inches long and one and a half feet in diameter, fixed on top of the lamp. The interior of the cylinder is divided up by a series of vertical and parallel plates one inch apart and extending the full length of the cylinder, one end of which has a removable cover with a handle on it. This cover has a concave reflector on its inside surface, with a small hole in the centre. The light is flashed on to the target by directing the cylinder on to the latter by a sighting apparatus through its long axis, while the cover is held by a man about eight inches in rear of the cylinder, and keeps the shadow of the small hole on the sight in a similar way to the working of a heliograph. The lamp is only used

Switzerland.

when there is no sun. The reflection of the sun's rays is very powerful, and satisfactory results have been obtained from its use during training and manœuvres.

Inspector-General's Report.—In his annual report, dated 17th September, 1909, Brigadier-General E. A. Garlington, Inspector-General, states that inspection of

the military establishments during the past fiscal year has been more complete than in any year since the Spanish-American War. The present scheme of inspections limits the inspection of garrisons and stations to once a year, and the funds allotted to the Department for mileage are based upon this scheme. This should be changed so as to provide for at least two visits to each station during the year—one inspection should be confined to an examination into post administration and the other include practical tests of the troops as fighting units.

Reports of inspection of 117 of the garrisoned posts inspected during the year show 4,148 irregularities and deficiencies on the lists furnished the post commanders by the inspectors—an average of about 35 per post. As compared with the figures for the preceding year, the average number of defects and irregularities and deficiencies reported per post has increased about 40 per cent. These irregularities and deficiencies, except those submitted to the Chief of Staff, refer more particularly to the failure on the part of responsible officers to comply with Army Regulations and existing orders. This failure seems to be due in part to the frequent change or modification of Army Regulations or existing orders.

It is believed that the Army is greatly in need of increase of the Infantry and Field Artillery and reorganisation of the Cavalry. Legislation to this end would, no doubt, be facilitated by quartering the troops where they would come closely in contact with the people, abandoning isolated posts, stationing the troops in thickly settled communities and keeping them at their stations for longer periods. Armies maintained in the tropics should, as far as possible, be stationed at an altitude of from 1,500 to 5,000 feet above the level of the sea. As a rule, the Philippine Scout companies have made a very creditable showing, and this fact speaks well for the efficiency and capability of their officers. Details on extra and special duty are largely accountable for the large percentage of absenteeism from drills and other military instruction. The remedy for this would seem to be a service corps, recommended in the last annual report.

The practical instruction of the troops as a whole during the past year seems to have been worthy of commendation, yet the standard attained in field training and general efficiency as a mobile force is not altogether what it should be. Both officers and men are deficient in tactical instruction, and the standard reached is not what we have a right to expect. Major Bundy, Department of Texas, expresses the opinion that the deficiencies in tactical training, so far as the Infantry is concerned, is due very largely to the presence in the Infantry Drill Regulations of what is known as the normal attack. The entire subject of gunners, and the qualifications necessary for this grade, should be carefully gone over by the General Staff. A very creditable state of discipline was maintained, as a rule, throughout the Army generally, but there can be no doubt that the discipline and efficiency of troops were lowered by the continued absence

United States.

of so many company officers and the resulting frequent changes of company commanders. Target practice is, as a rule, conscientiously carried out, and the records, in the main, are accurately kept, though there seems to be a somewhat general opinion that they might easily be falsified. To minimise the chance or opportunity for falsifying the target records, several recommendations have been made by inspectors. It is recommended that an allowance of at least twenty rounds of rifle ball cartridges per man per year be authorised for use in practical tests by inspectors to determine whether organisations have attained the proper efficiency and whether individuals have the ability in the use of the rifle shown by their classification at target practice.

There is a general complaint that the Service is more or less crippled by reason of the large percentage of officers constantly absent from their commands. It should be determined whether the valuable services rendered the Government by the officers now on detached service compensate for the loss of efficiency in their own organisations. The lists of instructors and other details at the U.S. Military Academy and at the Service schools should be scrutinised and reduced to the lowest limit. It is well known that such lists will grow beyond reasonable proportions unless held down by independent authority. It would be well to make the experiment with one Pacific transport of relieving the transport quartermaster and placing the master of the ship in control, giving him a competent purser. If the experiment proved successful, several officers could be returned to duty with their regiments, the expensive offices maintained on all transports abolished and more space for passengers procured.—*Army and Navy Journal*.

CORRESPONDENCE.

PRISM GLASSES.

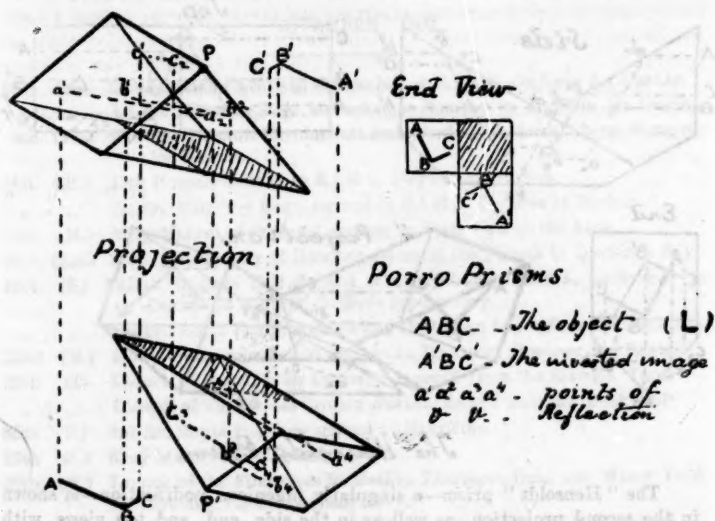
To the Editor of the JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION.

SIR,—Prism glasses are in such general use, while the principle of their construction is so little known, nothing on the subject being published, that a brief explanation may prove of interest to many readers of the JOURNAL.

A prism glass is a short telescope. In ordinary hand telescopes the object glass forms an inverted image of the object; this inverted image is erected by a pair of lenses, forming an erected image at their focus, and this erected image is viewed through a magnifying eye-piece. Thus the total length is the sum of the focal distance of the object glass, of the length of the erecting lenses from focus to focus, and of the focal length of the eye-piece.

Now in the prism glass a pair of inverting prisms is placed between the object glass and its focus, by which the direction of the rays from the object is inverted, and thus an erect image is formed at the focus which is

viewed through a magnifying eye-piece. Erecting lenses being dispensed with, and the path of the rays being doubled on itself, the length of the telescope tube is considerably reduced.



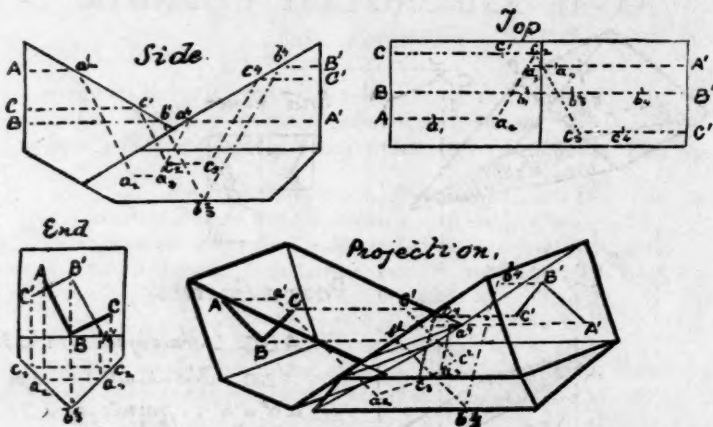
Projection and end views of the ordinary Porro prisms are shown here. The prisms are right angled, of solid glass, the sloping sides being the reflecting surfaces. The prisms are fixed in the telescope tube, so that the shaded surfaces are opposite and parallel, and the axes of the prisms are at right angles to each other.

The object ABC . (the letter L) is in thick lines, the image $A'B'C'$ is viewed by the eyepiece. The paths of the rays from object to image are shown by dotted lines, and the points of reflection by small letters. Thus, taking A , the top of the L , the ray is reflected at right angles from a^1 on the left face of the inner prism to a^2 on the right face, from which it is reflected at right angles to a^3 on the further face of the outer prism, and then to a^4 on its nearer face, and finally to A' , and so with the other points in the objects. The end view shows object and image without distortion. The necessary rounding of the angles of the prisms to fit them into the tubes is not shown in the sketches.

The path of the rays is folded on itself, as it were, and this reduces the length of tube, which would otherwise be necessary; the reduction is twice the distance separating the angles of the prisms, or twice PP' .

There are several modifications of the Porro Prism in use by different makers. In one the two prisms are brought together and are either cemented together at the shaded surfaces, or the double prism is worked out of one piece of glass. The double prism is then fixed close to the eyepiece, and the convergence of the rays from the object glass admits of a

considerably smaller prism being used—and the single prism is less liable to accidental disturbance—while the form of the tubes is less unsightly and clumsy than in the ordinary Porro glass.



The Hensoldt Prism.

The "Hensoldt" prism—a singularly ingenious modification—is shown in the second projection, as well as in the side, end, and top views, with the paths of the rays from object to image explaining the inversion. It consists of two planes, sloping inwards at 30° on the top of a right-angled prism. The right-hand plane and prism are worked out of the solid; the left block is a separate piece of glass. The line joining the centre of the square ends lies in the axis of the tube, and this enables a slender and slightly tube to be used, having only a shallow projection at the inner side, into which the prism fits. In this glass, half the field is reflected to the left from the right face of the prism and half to the right from the left face, forming one clear image, in which no line of separation is perceptible. The width of the prism is half that for a Porro of the same field. In every case the rays from object to image are reflected at four points. To illustrate the action of the Porro prisms, take a piece of semi-transparent paper, mark the letter L on it, turn the paper over from left to right, and the letter will be inverted thus J in one sense—this is what the inner prism does; then turn the paper over once more at right angles, from top to bottom, and the letter will be again inverted in the second sense J, and thus completely inverted, and this is the action of the outer prism.

W. H. MACKESY,

26th April, 1909.

Lieut.-General.

NAVAL AND MILITARY CALENDAR.

NOVEMBER, 1909.

- [1st (M.) 15th Hussars embarked at Bombay in R.I.M.S. *Dufferin* for Durban.
 " " 1st Bn. Wiltshire Regt. embarked at Bombay in *Dufferin* for Durban.
 4th (Th.) 2nd Bn. Cameron Highlanders embarked in *Soudan* at Ching-Wang-tao for Madras.
 14th (S.) 15th Hussars arrived in R.I.M.S. *Dufferin* at Durban.
 " " 1st Bn. Wiltshire Regt. arrived in R.I.M.S. *Dufferin* at Durban.
 15th (M.) Ming Manoel of Portugal arrived on State visit to the King.
 20th (Sat.) 150th Anniversary of Hawke's defeat of the French in Quiberon Bay.
 21st (S.) XIIIth Brigade R.H.A., and XVIIth Brigade R.F.A. embarked at Durban in R.I.M.S. *Dufferin* for Bombay.
 " " 3rd Bn. Royal Fusiliers embarked at Durban in *Dufferin* for Mauritius.
 22nd (M.) 4th Hussars embarked at Durban in Transport *Braemer* for England.
 25th (T.) Launch of Second-class Cruiser *Newcastle* from the Elswick Yard.
 " " Launch of Third-class Cruiser *Blanche* from Pembroke Dockyard.
 26th (F.) 3rd Bn. Royal Fusiliers arrived at Mauritius.
 27th (S.) King Manoel left England.
 29th (M.) Launch of the First-class Battleship *Thuringen* from the Weser Yard, Bremen, for the German Navy.
 30th (T.) 2nd Bn. Loyal North Lancashire Regiment embarked at Mauritius for Bombay.

FOREIGN PERIODICALS.

NAVAL.

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AUSTRIA-HUNGARY.—*Mittheilungen aus dem Gebiete des Seewesens*. No. 12. Pola: December, 1909.—"Deep Sea Diving" (concluded). "A Contribution to the Question of the Type and Armament of Modern Fleets." "Naval Artillery and the Struggle Over the Adoption of High Explosives Shells." "Protection of Battleships against Underwater Attacks." "Abstract of the Report of M. Chautemps on the French Naval Artillery." "New Form of Masts for Battleships." "A Division of Four Units."

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La Vie Maritime. Paris: 10th November, 1909.—"The Distribution of the Naval Forces." "The New Head of the Technical Section." "The Firing at the *Iéna*." "The New Programme for the *Inscription Maritime*." "Useless Scribbling." "Launch of the *Mirabeau*." "Cruise of Submersibles." 25th November.—"The Firing at the *Iéna*." "The French Navy." "Useless Scribbling." "One Would Like to Know."

Le Yacht. Paris: 6th November, 1909.—"The Results of the Firing at the *Iéna*." "Yachting Notes." "The Disposition of the Guns on Board Battleships." 13th November.—"New Constructions." "Yachting Notes." "Naval Artillery Engineers." "The Autonomy of the Ports." 20th November.—"New Constructions" (concluded). "Yachting Notes." "The Reception of Lieutenant Shackleton by the Geographical Society." "The Brazilian Battleships of the *Minas Geraes* type." 27th November.—"The Commission of Classification." "Yachting Notes." "The *Nassau* and Her Sisters."

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Association." Exchange of Views on the Essay—"Tsushima from the French Point of View."

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Officer?" 4th November.—"The Italian Grand Manœuvres." "Distance Ride for the Kaiser's Prize." "Shorthand Writing and the Army." 6th November.—"Once More Fortress Manœuvres." "Two Hundred and Fifty Years Ago: The Great Elector in Upper Pomerania; Siege of Demmin, October-November, 1659" (continued). "The Italian Grand Manœuvres" (concluded). "Recruit Training." 9th November.—"The Military Element in Childhood and Schiller's Youth." "The Campaign of 1815 and the Military Reputation of the Belgians and Dutch." "Problems for Musketry Instruction." 11th November.—"Garibaldi in France, 1870-71." "The New Turkish Military Pensions Law." "On the Deepening of Service Instruction in the Cavalry." "The Position of the Field Artillery in the Manœuvres." 13th November.—"Obituary Notice: General-of-Infantry Graf von Verri della Bosia." "What Lessons are to be Learnt from the Fighting Round Port Arthur in the Matter of Coast Fortifications" (concluded). "Garibaldi in France, in 1870-71" (continued). "The New Turkish Military Pensions Law" (concluded). 16th November.—"The New Issue of the Infantry Drill Regulations." "Garibaldi in France, in 1870-71" (concluded). "Non-commissioned Officers' and Men's Libraries." 17th November.—"The Strengthening of the French Field Army." "Riderless Field Batteries at the Manœuvres." 20th November.—"Reminiscences of a Former Cavalry Officer of General-of-Infantry von Schlichting." "Two Hundred and Fifty Years Ago: Maxen" (continued). "The Strengthening of the French Field Army" (concluded). 23rd November.—"Something about the Fighting Value of Cavalry of the Present Day." "Firing Experiments at Tangerhütte" 25th November.—"French and German Manœuvres." "Two Hundred and Fifty Years Ago: The Electoral Brandenburg Troops under Major-General von Quast in Holstein: Landing on Fünen Island: Battle of Nyborg, November, 1659" (continued). "The Question of Black Troops." 27th November.—"Obituary Notice: Colonel Bernhard von Eoten." "People and Army." "Two Hundred and Fifty Years Ago" (concluded).

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ITALY.—*Rivista di Artiglieria e Genio.* Rome: September, 1909.—"Heavy Field Artillery." "Detonating Fuzes and Detonators." "Systems of Construction of Modern High Velocity Artillery." "The Brasacalini Horizontal Base Position-Finder." "The Determination of Range and Position of Masked Batteries." "A Differential Gear with Cylindrical Wheels." "A Tri-phase Apparatus for Obtaining any Integral or Fractional Number of Turns in a Rotor."

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SPAIN.—*Revista Técnica de Infantería y Caballería*. Madrid: 1st October, 1909.—"Napoleon and the Peninsula War." "The Principal Arms and the Auxiliaries in the Struggle for Positions in the Field" (concluded). "The Present Times and the Grand War." "Report on the Musketry Course by Infantry First-Lieutenants at the Central Musketry School in 1907" (concluded). "The Roll of Honour under the Empire" (concluded). "Recollections of the War of 1870-71." "Aerostation in Our Army." 15th October.—"La Revue de l'Armée Belge." "Recollections of the War of 1866." "The Infantry in the French Army." "Our Army in the War of Independence." "Culture and Work." "Aerostation in Our Army" (continued). "Military Technics."

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NOTICES OF BOOKS.

Fifty Years of it. By The Rt. Hon. Sir J. H. A. MACDONALD, C.B.
London and Edinburgh: Blackwood & Sons, 1909.

There is nobody better qualified than is Sir J. Macdonald for chronicling the events of the fifty years which have all but elapsed since General Peel issued the call for Volunteers to enrol and organise themselves for home defence. During that long time the author of this very cheery volume has not only worked so as to make himself a thoroughly efficient Volunteer in every sense of the word; but he has helped, by pressure from the Volunteer Force, to introduce many greatly needed reforms into the Regular Army. Sir J. Macdonald was one of the first to join the Barristers' company of the Queen's Volunteer Rifle Brigade, formed in Edinburgh, in the old days when extreme rigidity and exactness of movement were considered to be all that could be required, either of the Regular or of the Volunteer, and when anything like simplicity of drill and manœuvre was carefully avoided and forcibly condemned. From almost the very first Lord Kingsburgh saw how matters might be improved, that discipline and fighting value did not depend upon many and elaborate movements, or upon the maintenance of the stiff and mechanical appearance of the individual soldier. In this book he tells us of how he set to work to improve matters, of the many disappointments and rebuffs he experienced, of the support and encouragement he received from the progressive party in the Regular Army and of the success which, by degrees and after long years, rewarded his efforts. Many distinguished officers have not failed to place on record how often tactical and other reforms have been introduced into the Army by the pressure exercised by and from the Volunteers, and to no man is more acknowledgment due for the common-sense now allied with drill and manœuvre than to Sir J. Macdonald. His book is, however, no mere record of his triumphs over red tape and over those who would have had us retain the wooden movements which were our long legacy from the days of Frederick of Prussia, but it contains reminiscences of old days, numberless good stories, and memories of many friendships formed in the Force for which he did so much, and in which he will long be remembered as one of its most distinguished officers. It would have been matter for genuine regret had Lord Kingsburgh not given us, in what should have been the year of its Jubilee, this very charming record of fifty years in the old Volunteer Force.

The Navy League Annual, 1909-10. Edited by A. H. BURGOYNE. Price, 2s. 6d. London: John Murray.

Of the making of Naval Annuals there seems no end; nevertheless we give a hearty welcome to the third issue of the Navy League Annual for 1909-10, and all the more so, as it not only contains a great deal of valuable information and interesting matter, but it is offered at a price sufficiently low to bring it within the reach of that rapidly increasing number of the public who take a greater interest in the Navy than was formerly the case, but who find it inconvenient to purchase the more expensive "Brassey" or "Jane." That the Annual is now recognised as a work of real importance is shown by the fact that the new edition has been brought out by the famous publishing house of John Murray, which fact alone may be accepted as the hall-mark of present and future success.

The first six chapters are devoted to the progress of our own and foreign Navies, which will repay the reader who is seeking information on that point. In Chapter VII. the Editor deals with the question of "Comparative Naval Strength"; in this regard he states that it is strange to have to chronicle that between the Christmases of 1908 and 1909 the British Navy will be in a position of naval superiority as against foreign nations never before attained. This is rather a disputable statement, for, relatively speaking, in 1904, before the *Dreadnought* era, and the scrapping of valuable ships, which began in that year, we were far stronger than we are to-day. Mr. Burgoyne, however, rightly points out that our preponderating strength of to-day can in no circumstances be accepted as a criticism of our effective forces of the immediate future. We owe our present position partly to the successful efforts made by Sir F. Richards and Lord Walter Kerr to build up our fleet to a safe standard of strength, and to-day, as far as *Dreadnoughts* are concerned, to good luck due to the delays in the advancement of foreign programmes, created by the advent of the *Dreadnought*, and in no way to the foresight or energy of the present Government. Luck for the moment has pulled them out of a very tight corner and saved the nation, for a brief spell, from a situation of peculiar danger. But the period of uncertainty abroad has now come to an end, and since the Annual was published, Germany has commissioned her first two *Dreadnoughts*, and others are being pushed on with feverish haste; the trials of the first two of the U.S. ships of this type have been successfully completed, and next year France will probably complete three of the *Dantons*. In fact, no matter what our building programme may be, there can be no question that the next twelve months will see the naval position, as far as we are concerned, much changed for the worse. As far as can be seen at present, most experts will agree with Mr. Burgoyne's views that nothing but a programme of eight armoured ships for the next two or three years, at least, can possibly save the situation for us, and any further delay or hesitation in building must involve us in the gravest risks. The Editor also deals ably and moderately with the protected cruiser and destroyer questions, and shows, as regards cruisers, how rapidly our older units are approaching the age limit, and he makes the moderate estimate that in view of the number of these vessels Germany is now constructing, seven or eight units a year will be none too many to meet the necessities of the case. He also dwells on the importance of providing vessels for

"showing the flag," and, turning to destroyers, shows convincingly that if ten years is accepted, as is generally the case now, as the life of destroyers, that we possess but a bare equality with Germany—a very serious state of things indeed.

The chapter on "Comparative Strength" is followed by a series of interesting papers on naval subjects, all of which will repay reading. Lord Elcho contributes a short but inspiring note on the "Navy and Empire," and the necessity of a strong navy, if our Empire is to be maintained. "It was sea power," he remarks, "in years gone by that gave us the British Empire, and sea power alone can keep it for our children in that integrity we have maintained until now." Count von Reventlow, the well-known German naval expert, deals with the naval policy of Germany, which is of value, although evidently written for consumption by English readers; while another writer, Mr. Bywater, gives an extremely interesting account of the training of the German bluejacket, and he bears testimony to the spirit of deep enthusiasm which permeates officers and men alike. Though little is known abroad of the degree of excellence attained by the German gunners, competition is very high, and good shooting has its reward even to the extent of personal congratulations by the Kaiser. "Ship competes with ship for the first place in gunnery, not simply for the ephemeral triumph of squadron or fleet supremacy, but from an earnest ambition to be ready for the prompt pulverisation of the foe." Mr. Bywater has lived long in Germany, and the evident knowledge of his subject with which he writes lends additional weight to his remarks. An able and also well-known French writer, M. Loir, contributes a paper on "The French Need for Capital Ships," in which he points out the necessity for the immediate reorganisation of the French Navy and the construction of improved *Dreadnoughts*: "To hesitate any longer in this matter," he remarks, "will be for France the throwing up of all power upon the sea. . . . It is essential because she has allies or friends."

A Japanese writer, Mr. Satou Kato, contributes an article on "The Mastery of the Pacific," which gives plenty of food for thought. He is an expert on international subjects, and his comments on the Anglo-Japanese Alliance will be read with interest. Other subjects dealt with are the "Evolution of Submarine Vessels," by M. Laubeuf, the great French designer of submarines; the "Popularisation of the Navy"; and the "Trend of British Battleship Design." Space, however, will not allow us to do more than draw attention to them; but we may say that they are all well written.

The Annual concludes with a number of valuable tables, notable among them being Table G, which gives the contemporary battleships of the chief naval Powers at various dates. It is peculiarly interesting, as it shows how different rivals have come to the front, and how some have then fallen back in the struggle for naval power. Another valuable table is the list of dry and floating docks capable of holding the latest and largest armoured war vessels.

Mr. Burgoyne is to be heartily congratulated on the extremely valuable work of reference he has produced, and we can only say that "Brassey" in the future will have to look to its laurels if it is to keep ahead of its youthful competitor. The illustrations of ships are most excellent, and as good as we have seen in any work of the kind.

PRINCIPAL ADDITIONS TO LIBRARY, NOVEMBER, 1909.

Story of the Russo-Japanese War, 1904-05, from the Outbreak of the Hostilities to the 24th August, 1904. By Lieut.-Colonel H. M. E. BRUNKER. 8vo. 5s. (Presented.) (Forster Groom & Co., Ltd.) London, 1909.

Military History for Examinations, December, 1909—May, 1910: Questions on the Russo-Japanese War, 1904. By Lieut.-Colonel H. M. E. BRUNKER. Crown 8vo. 1s. (Presented.) (Forster Groom & Co., Ltd.) London, 1909.

Report on the Second Cavalry Staff Ride held by the Director of Staff Duties, 21st to 26th June, 1909. 4to. (Presented.) London, 1909.

Hints on Military Landscape Sketching. By Captain W. ALLASON. Crown 8vo. 2s. 6d. (Presented.) (Forster Groom & Co., Ltd.) London, 1909.

A Short History of the Chief Campaigns in Europe Since 1792. By General A. VON HORSETZKY. Translated by Lieutenant K. B. FERGUSON, R.G.A. 8vo. 18s. (Presented.) (John Murray.) London, 1909.

Letters to "The Times" upon War and Neutrality (1881-1909), with some Commentary. By Professor T. E. HOLLAND, K.C. 8vo. 6s. (Longmans, Green & Co.) London, 1909.

The Rifle in War. By Captain H. E. EAMES, U.S.A. 8vo. (Presented.) (U. S. Cavalry Association.) Fort Leavenworth, Kansas, 1909.

All the World's Airships, 1909-10 (Aeroplanes and Dirigibles). By FRED T. JANE. Oblong 4to. 21s. (Sampson Low, Marston & Co., Ltd.) London, 1909.

Supply Manual (War). Crown 8vo. 6d. (Presented.) (Harrison & Sons.) London, 1909.

The Crimean Commission and the Chelsea Board. By Colonel Sir ALEXANDER TULLOCH. 2nd Edition. 8vo. (Presented.) (Harrison.) London, 1880.

The Strategical and Tactical Employment of the Medical Service, as Carried out in an Army Corps. By Lieut.-Colonel MAXIMILIAN RITTER VON HORN. Translated by Lieut.-Colonel W. G. MACPHERSON, C.M.G., R.A.M.C. 8vo. 4s. 6d. (Presented.) (Harrison & Sons.) London, 1909.

The Question of Mounted Infantry. By a Rifleman. 8vo. (Presented.) (Hugh Rees, Ltd.) London, 1909.

Historical Records of the Denbighshire Hussars Imperial Yeomanry from their Formation in 1795 till 1906. Compiled by Colonel LL. E. S. PARRY, D.S.O., and Engineer Lieutenant B. F. M. FREEMAN, R.N. 8vo. (Presented.) (Woodall, Minshall, Thomas & Co.) Wrexham, 1909.

RECENT PUBLICATIONS OF MILITARY INTEREST.

COMPILED BY THE GENERAL STAFF, WAR OFFICE.

OCTOBER, 1909. PUBLISHED QUARTERLY.

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Continued from November JOURNAL, p. 1548.

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PREFATORY NOTE.

This Pamphlet will be issued quarterly, in April, July, October and January. Its purpose is to draw the attention of Officers to British and Foreign publications of Military interest which are likely to assist them in their professional work. Copies of the pamphlet will be distributed to the Headquarters of Commands, Educational Establishments, Units and Reference Libraries.

PART II.

SECTION I.

NOTE.—1 When the price is not given in Part II., Section I., it is not known.
2 In Part II., Section I., books whose titles are given in foreign languages as well as in English are published in those languages, and are not translated.

MEDICAL.

The Physical Condition of Men Qualified to Serve as One-Year Volunteers in Germany. (Ueber die Körperbeschaffenheit der zum einjährig-freiwilligen Dienst berechtigten Wehrpflichtigen Deutschlands). By Dr. H. Schwiening, assisted by Dr. Nicolai. 192 pp., with 15 graphic charts in text and 7 maps. 4to. Berlin, 1909. Hirschwald. 5/-.

This volume is No. 40 of the publications of the Medical Department of the Prussian War Office on subjects connected with the work of the Army Medical Service. Dr. Schwiening has charge of the Medical Statistical Department of the War Office and Dr. Nicolai is in medical charge of one of the regiments of Guards in Berlin. The material for their monograph is obtained from official sources and has been collected during 1904, 1906 and 1908 by special cards, which have been filled in at the time of the examination of one-year volunteer recruits and transmitted to the Prussian War Office. The Bavarian War Office co-operated with the Prussian War Office and forwarded the cards from Bavaria to it. The material, therefore, covered the whole of the German Empire.

The primary object of the investigation was to examine into the truth or otherwise of complaints to the effect that the secondary schools in Germany had an unfavourable influence on the physical development of the pupils, especially in connection with eyesight.

Qualifications to serve as a one-year volunteer is obtained in three ways: (1) By special certificate on leaving the secondary schools; (2) by passing a special examination before a qualifying committee; and (3) by the possession of special technical knowledge as a skilled artisan, and passing only an elementary examination in general knowledge. 50,454 cards were examined, but of this number only 52,640 were suitable for purposes of compiling comparative tables. Of these 50,407 or 95.7 per cent. belonged to the first class, 1,976 or 3.9 per cent. to the second, and 267 or 0.5 per cent. to the third. Of the 50,407 with school leaving certificates, 25,246 came from the "Gymnasien," 8,953 from the "Realschule," 6,791 from the "Realgymnasien," 4,996 from the "Oberrealschule" and 2,910 from the "Seminarien." Small numbers came from six other classes of schools, including 601 from agricultural colleges.

The authors have compiled numerous tables and statistics from the individual cards showing the proportion of recruits rejected from various causes in each of the schools, and have presented the facts in a series of admirably arranged chapters. Of the

52,640 the total number rejected as unfit was 18,406 or 35 per cent., and the highest percentage of rejections, 37.8, was amongst pupils of the "Gymnasium" class of schools, i.e., the schools equivalent to our higher public schools, which train for the universities; the lowest percentage, 16.6, was amongst the pupils of agricultural colleges.

The influence of the age at which the pupil left school and of the length of time which had elapsed between the period of his leaving school and applying for military service, is also minutely examined. The author's conclusion is that the proportion of rejections increases with the age at which the pupil leaves school and also with the period that elapses between his leaving school and applying for military service. There is an interesting chapter on the degree of unfitness for service. Three degrees are classified, namely: (1) Defects causing only conditional unfitness; (2) defects causing unfitness for service except in the "Landsturm," and (3) defects causing total unfitness. The second degree gives by far the largest proportion of rejections, namely, two-thirds, and the third degree the least.

A chapter is devoted to a consideration of the diseases and defects causing rejection. The proportion of rejections on account of general weakness, including weakness of thoracic development, is overwhelming. It amounted to 36.4 per cent. of the total rejections, or 12.8 per cent. of all the recruits examined. If diseases of the lungs and pleura are added practically half of the rejections are due to general weakness and these diseases combined. The next highest cause of rejection is diseases of the heart and larger blood vessels, which show 14.7 per cent. of the total rejections and 5.1 per cent. of the total examined. Defective vision caused 10.3 per cent. of the rejections and 3.6 per cent. of the total examined. Other causes of rejection were in comparatively small proportions. Compared with ordinary recruits the proportion of rejections for general weakness is practically the same, but heart diseases, diseases of the lungs and pleura and defects of vision are in much higher proportion among the one-year volunteers, namely 14.7 per cent., 4.5 per cent. and 10.3 per cent., as compared with 5.8 per cent., 1.9 per cent. and 4.4 per cent. Hernia, flat-foot and varicose veins, on the other hand, are in higher proportion among ordinary recruits.

A chapter on the distribution of the recruits according to place of birth is interesting in showing the proportion of these diseases in the different states and provinces. Among the one-year volunteers rejected on account of general weakness, by far the largest proportion were of Berlin birth, while Bavarians showed a very high proportion of rejections on account of heart disease. Silesia had the highest proportion of rejections on account of defects of vision.

Tables are given showing the heights of the one-year recruits according to schools, causes of rejection and places of birth, and the heights are also compared with those of ordinary recruits. The one-year volunteers are generally taller, as is shown in the following table:—

		One-Year Volunteers.		Other Recruits.	
		Per cent.	Per cent.	Per cent.	Per cent.
Under 61 inches	..	0.5	3.7		
61 to 63	32	3.3	9.2		
63 to 65	39	13.3	25.5		
65 to 67	39	28.6	30.5		
67 to 69	39	29.6	21.2		
69 to 71	39	17.6	7.8		
Over 71	32	6.9	2		
Total	...	100	100		

The greatest number of rejections as unfit was amongst the men under 61 and under 63 inches in height; as many as 34.9 per cent. of the smallest class and 22.2 per cent. of the next height being rejected on account of general weakness and lung disease. The tallest recruits came from Mecklenburg-Schwerin and Strolitz, 34.1 per cent. of their number being over 69 inches in height.

The opportunity is taken of testing the value of what is known as the Pignet coefficient of physical vigour, based on an index derived from height, weight and chest measurement. Pignet's coefficient is the figure obtained by subtracting the sum of the height and chest measurement in centimetres from the weight in kilogrammes.*

Any figure under 16 represents very strong physique, 11 to 15 strong physique, 16 to 20 good, 21 to 25 moderate, 26 to 30 weak, 31 to 35 very weak, and over 35 altogether unsatisfactory physique. Although the percentage of rejections on account of general weakness and lung diseases increases in proportion to these figures in a marked degree, still there were as many as 68 rejections for these causes among the "very strong" and 204 among the "strong" and "good," while as many as 13,955 were fit for service whose coefficients according to Pignet were moderate or weak, 3,368 were fit with "very weak" coefficients and 867 with "altogether unsatisfactory" coefficients.

Many other anomalies and contradictions are disclosed in connection with the application of Pignet's formula to these recruits; and the chapter dealing with this subject is of value in many ways, although the results are of a negative character.

The volume closes with a long chapter by Dr. Nicolai on special observations regarding defects in the eyesight of the one-year volunteers, and with conclusions and summaries of results. The main point in the eyesight investigations is that the percentage of cases of myopia in the "Gymnasium" recruits is enormously greater than that of recruits from the village, elementary and middle schools; it is also much higher than that of recruits from the "Realschule." 47.8 per cent. of the "Gymnasium" recruits have defects of vision and 36.9 per cent. are myopic. Dr. Nicolai's chapter is not confined to the examination of the 52,640 statistical cards alone, but is a monograph on the subject of visual defects generally in schools and gives the results of investigations both in Germany and other countries. The volume represents a vast amount of labour, but Dr. Schwiening regards it only as a first instalment of the statistics which the German army medical authorities are collecting on the subject, and as insufficient at present for the purpose of drawing general conclusions.

* See Journal Royal Army Medical Corps, vol. xi., 1906, p. 105.

Qualities Affecting Fitness for Military Service. (Aptitude et acoutumance au service militaire.) By Méd. Maj. Dupeyron. 31 pp. 8vo. Paris, 1907. Maloine. -/10.

This is a lecture given in 1907 to the officers of the 83rd Infantry Regiment by the author. It contains details of losses by disease in peace and war; causes of rejection of recruits; hereditary influences and some other factors in the social life of France which affect the national fitness for military service.

The Hospitals of the Present Day in Germany and other Countries. (Deutsche und Ausländische Krankenanstalten der Neuzeit.) By F. Ruppel. 149 pp., with 206 drawings in text. 4to. Leipzig, 1909. Leineweber. 12/-.

This volume, by a German architect, gives descriptions and plans of several of the most modern hospitals in German cities, in Austria, Holland, France and England, and is a valuable work of reference in connection with hospital construction. It is the result of investigations and studies made by a special committee of construction previous to designing a new hospital for Hamburg. The British hospitals studied are the Royal Infirmary and New Fever Hospital, Edinburgh; the Western Infirmary, Stob Hill Hospital, the Maternity Hospital, Rushill Hospital and Royal Infirmary, Glasgow; the Royal Infirmary, Manchester; the David Lewis and City Hospitals, Liverpool; and in London, the Brook Fever, King's and University College Hospitals.

The Voluntary Aid Detachments of the Red Cross in Germany. (Das Sanitätskolonnenwesen vom Roten Kreuz in Deutschland.) Edited by Prof. Dr. Kimmle. 355 pp. 8vo. Berlin, 1908. Carl Heymann. 6/-.

This volume is a series of thirty articles written by various members of the German Red Cross Society on subjects connected with the historical development of the voluntary aid detachments ("Sanitätskolonnen"), or with their organisation, training and work generally. It is a volume which should be studied closely and read by everyone who is considering the organisation of voluntary aid for sick and wounded in war in this country. It not only contains interesting historical facts, but is also a mine of information in the matter of details of organisation, training and many other points with which organisers of voluntary aid will be confronted at the very commencement of their work. The first article is an introductory biographical notice of General von Viebahn and his work. Then follow papers on the historical development and present state of the "Sanitätskolonnen" in Baden, Bavaria, Hesse, Prussia, Brandenburg, Saxony, Württemberg. In several of these, complete details are given of the equipment and clothing of the members, the transport and other material of the detachments, the cost of maintenance, organization, exercises and so on. In the article on the Prussian detachments there are some interesting tables showing a steady increase in the number of detachments from 1895 to 1907 in the several provinces of the kingdom. In 1895, for example, the membership consisted of 8,958 persons, a number which has increased year by year by steady increment till it has reached 25,654 in 1907 representing a ratio of 5.7 per 10,000 of male population in the former year and 12.9 in the latter. As no person liable to military service, except in the "Landsturm," may be enrolled in the voluntary aid detachments, and as physical fitness is one of the conditions of membership, all males between the ages of 20 and 39 are excluded, and the above ratios consequently represent a very much higher percentage of the population available for membership than appears at first sight. The author of this article states that in 1908 there were 940 voluntary aid detachments with a membership of 28,000 ready in Prussia to help in the care of sick and wounded in war as well as organized to help in saving life in time of peace. Of the different provinces Brandenburg, with a ratio of 27.8 per 10,000, shows the highest percentage of membership and Berlin with 4.3 the lowest.

Some general statistics for the whole of the German Empire given in a later article are also worth noting. In 1908 there were 1,514 voluntary aid detachments, with a membership of 53,000, organized for work in 400 towns and 640 country districts. These 53,000 are not men who have simply been through a course of first aid and then gone their way, but they are practically and thoroughly trained to undertake life-saving work independently and are being continuously exercised by medical men. In 1907 they dealt with 31,701 accidents of greater or less importance, without counting the numerous minor cases which were not brought to notice.

Other articles deal with such subjects as the organisation of voluntary aid detachments for ambulance work in large towns, plans and description of a drill hall or training establishment for the detachments at Nürnberg; a description of the accident aid-post at Gross-Lichterfeld; the voluntary aid detachments during the South-West African Expedition, with illustrated details of clothing, equipment, and arms of voluntary aid detachments for service in the Colonies; details of exercises and training; principles upon which the direction and organisation of the detachments are based and the training and duties of detachment and section leaders; the necessity of training a personnel for care of sick and wounded as well as for stretcher-bearer work, with details of a course of training; the employment of voluntary aid detachments in connection with epidemics; the best way of utilizing river boats or barges for transport of sick and wounded; and articles connected with the position of the detachment in relation to the laws of the country, Samaritan societies, conditions of service for service in the said, and the aims and objects of committees and meetings of the directors and medical officers of the detachments.

The articles are not written for the purpose of publishing bald details but are thoughtful and suggestive papers on the subjects with which they deal.

This manual is published under the authority and with the approval of the Surgeon-General of the United States Army. In his introduction, Colonel Haward points out how military hygiene is indissolubly bound up with discipline, and that to preserve the health of troops the action of regimental and company officers is quite as necessary as that of the medical officers. He also exemplifies this in modern wars. The Japanese in Manchuria, he says, did not discover any new system of sanitation, but they excelled in discipline, prompt obedience to orders and administrative ability. He repeats, however, the usual mistake that their ratio of sickness was reduced to a minimum never before reached by any large army in the field, not by the use of special measures, but by the discipline which gave them more than double the average strength on which such calculations should be based, and does not take into consideration the duration of the campaign.

The arrangement of the volume is interesting and, in some respects, novel. After chapters on morbidity and mortality in military service and sickness in tropical countries, on diseases of the soldier, mosquitoes, parasitic diseases, and diseases "caused by immoral or intemperate habits," there are chapters on recruiting, exercise and training, marching, personal hygiene, water (including full descriptions of the newest field filters—the Darnall and the Ishiji [Eshitai]), food (including chapters on field cookery, travelling kitchens and the ration), clothing, barracks, hospitals, air, ventilation, heating and lighting, disposal of waste products and garbage, soil, camp sanitation, food, and food and marine hygiene. Extensive use is made of the experience of recent wars and there are a number of illustrations from reports on the Japanese War. The work is full of practical descriptive matter, very much up to date, and is a valuable addition to the books that have recently been written with a view to instructing military officers in all matters affecting the health of their men. It goes much further and covers a wider extent of ground than similar books published for the use of European Armies.

Nelson and other Naval Studies. By J. R. Thursfield. 374 pp., with index. 8vo. London, 1909. Murray. 12/-.

The latter is an interesting appreciation of the life and deeds of Paul Jones, and is largely based on Mr. Buell's biography of him.

The remainder of the volume consists of articles which have appeared in *The Times*, *The Naval Annual*, and other periodical publications. They are full of interest and of material for serious thought. Amongst these may be mentioned "The Strategy of Position," "The Attack and Defence of Commerce," and "The Higher Policy of Defence."

The Naval Annual, 1909. By T. A. Brassey. 426 pp., with numerous plates and diagrams and index. 8vo. London, 1909. Griffin. 10/6.

In view of the recent course of events and the interest which has been evoked in the progress of the Navies of the world, this year's *Naval Annual*, which is, as usual, divided into four parts, is of special interest.

Part I commences with a review of the year's work in British and foreign Navies, with their comparative strength in tabular form. It also contains chapters on dockyard administration, alternative systems of propelling machinery, naval volunteers, the naval expansion of gunnery, and manoeuvres carried out during the year.

In Part II. which contains alphabetical lists of British and foreign ships with plans, the leading particulars of ships are, for the first time, given on the plates.

Part III. gives armour and ordnance tables, and reviews, as far as is possible, the progress made in production and development, and the general trend of opinion as regards advance in this section.

Part IV. contains the First Lord's statement, the Navy Estimates at home and abroad, the programme of shipbuilding and a return of gunlayers' tests and battle practice. Lord Brassey contributes a paper on naval construction and a note on the North Atlantic Cable. A special letter on national defence, written by Mr. Francis Hirston, *The Times* in March, 1909, is also included. The other contributors are Mr. J. J. Javeland, Mr. A. Richardson, and the Marquess of Graham.

As a book of reference on naval matters this volume maintains the high standard of previous years.

Fighting Ships. By F. T. Jane. 491 pp., with numerous plans and illustrations. Fol. London, 1909. Sampson Low. 21/-.

In this year's issue of "Fighting Ships," special attention has been paid in Part I. to the German fleet and the present clearance of many of its ships is shown by means of photographs. As far as possible particulars of the new German warships are given and they vary considerably from those hitherto published. The editor, whilst admitting that the exact correctness of these cannot be guaranteed, considers that in the main they will be found to be approximately accurate.

Every type of man-of-war to be found in the world's fleets is represented, with particulars of its construction, armament and speed and photographs of auxiliaries take the place of the representations of fast liners in former issues. Part I. also contains plans of destroyers and torpedo boats, and generally deals with these craft in greater detail than formerly. The illustrations throughout this part of the book, which are very numerous, are extremely clear and interesting.

Part II. contains a valuable article on "Protection of Battleships against Submarine Attack," by Professor W. Hoegaard; and Mr. C. de G. Sells again contributes a paper on "The Progress of Warship Engineering." A silhouette index of merchant ships concludes this useful book of reference.

The Naval Pocket Book, 1909. Edited by G. S. Laird Clowes. 968 pp., with index. 12mo. London, 1909. Thacker. 7/6.

This annual publication retains the same form as previous editions. It contains classified lists of, and details with regard to, the Navies of all nations, their guns and small arms, notes on torpedoes, a list of dry docks at home and abroad, giving their measurements, and trial trip tables and tables for the conversion of foreign weights and measures. It concludes with rough plans of various types of battleships and cruisers, showing their armour and armament.

A handy book of reference on naval matters it maintains its former high standard.

ORGANIZATION AND ADMINISTRATION.

Supply Services in the Field. (Alimentation on Campagne.) Official. 76 pp. 8vo. Paris, 1909. Charles Lavauzelle. -/6.

This publication replaces that issued in June 1900. After giving a general summary of the respective responsibilities of the higher commanders and of officers of the supply corps, it deals with the question of supply under the two broad headings of "Organization" and "Work in the Field." Special orders and instructions for general officers commanding divisions and larger units follow, whilst at the end of the volume are appendices giving the scale of rations, forage and fuel under varying conditions.

As regards arrangement the new volume differs but little from its predecessor of nine years ago, but the trend of modern ideas has necessitated the introduction of material alterations under the old headings, and the embodiment of fresh instructions to meet altered conditions of organization. As regards the "general summary of responsibilities," the respective duties of commanders and of supply officers are far more clearly defined than formerly, but the regulations, though emphasising the importance of commanders and their supply officers being in close touch, empower the latter to act largely on their own initiative, and authorise them to depart, if needs be, from the instructions issued by the former.

Under the heading of "Organization," the chief innovation is the introduction of fixed supply units for an army, in addition to, but apart from, those belonging to army corps. These are: an administrative convoy, composed of two sections for each army corps; an army bakery, consisting of one field bakery per army corps; a cattle park, and various auxiliary convoys. The organisation of supply units for army corps and divisions is practically the same as formerly. The rations and forage now to be carried for all arms (except cavalry) are:—

	Rations Days.	Oats Days.
(1) Reserve	2	1
(2) Regimental wagons	2	2
(3) Army corps administrative park	2	2
(4) Army administrative park	2	2
Total...	8	7

In addition to the eight days' meat ration included in the above, there will be four days' meat supply on the hoof.

The old regulations provided for rations of two descriptions only, viz., the increased scale ration and the normal ration. The new regulations include a third, namely, the reserve ration, which is not to be consumed without special orders. This reserve ration comprises 10½ oss. of "galette" (special bread biscuit), 10½ oss. of preserved meat, 3 oss. of sugar, 1½ oss. of coffee in tablet form, 1½ oss. of soup and ½ dram of brandy. These are issued to the troops prior to their departure from the place of mobilisation, and are carried partly on the man and partly in the first line transport.

In the cavalry the following reserve rations are carried:—

"Galette"	1 day
Sugar and Coffee	3 days
Meat and soup	1 day
Brandy	1 day
Oats	4 lbs.

The 4½ lbs. oats may be consumed as soon as camp is reached, but in this case they must be replaced from the daily issue. Mention is made of the new mobile field kitchens which may be issued to certain army corps at the rate of one per unit, and instructions as to their use are given.

Under the second main heading of "Work in the Field" are included additional instructions for officers entrusted with supply duties, and for the employment and re-equipping of the new army administrative convoy.

The special instructions to divisional and higher commanders are amplified, and the points with regard to which supply officers should act in consultation with general officers commanding are more clearly defined.

Appendix I. gives as formerly the number of rations allowed for all ranks, but the scale of substitutes has been much increased.

Appendix II. deals with the forage. The scale of issue remains unchanged, but, apparently through an oversight, the scale of substitutes has been omitted.

Appendix III. gives the fuel ration. The issue of wood has been diminished; that of coal has been increased.

Appendix IV. gives the tobacco issue.

Several appendices which appeared in the old regulations, notably that dealing with the rations to be issued prior to entraining, &c., have not been reproduced in the new volume.

The Army and its Cadres. (*L'armée et ses cadres.*) By A. Messimy. 195 pp. 8vo. Paris, 1909. Chapelot. 2/-.

The writer was a member of the Chamber of Deputies at the time when the law dealing with the cadres of the Army was under discussion in the House. He claims that in the framing of such a law, questions affecting the supply and promotion of officers cannot be considered apart from problems of organisation and in the present volume he gives the full text of, and discusses at length, three proposed laws laid by him before the House, it being in his opinion, essential that they should be discussed *pari passu* with the law dealing with cadres.

These three proposed laws legislate respectively for the following:—

- (1) The supply of officers.
- (2) Promotion.
- (3) Retirement.

As regards the first, he points out the many inconveniences of the present system, and endeavours to evolve one which, whilst affording a similar training to all who aspire to become officers, admits of commissions being obtained as formerly through the ranks, as well as by entrance to the "Grandes écoles."

The method of promotion advocated is one of seniority combined with special advancement by selection. It is not, however, proposed to advance a selected officer by granting him several years' accelerated promotion at one time, but that at the end of each year he should be considered as having served a certain number of months longer in the rank which he holds than is actually the case, and that his seniority should be varied accordingly.

As regards retirement, the chief innovation in the proposed law is that after twelve years' service a certain number of officers should be permitted to leave the active army and become officers "de disponibilité." Such officers would receive special pecuniary advantages, but their military obligations would be greater than those of officers of the ordinary reserve.

The volume is instructive, and its interest is increased by the fact that the question of the supply of officers in our own Army is now claiming close attention.

The Colonies and Imperial Defence. By P. A. Silburn, D.S.O., M.L.A., Natal, late Major, Natal Permanent Forces. 360 pp. 8vo. London, 1909. Longmans, Green. 6/-.

The author has carefully studied the question of Imperial Defence, and his views as a late member of the Natal Permanent Forces and as a practical politician are entitled to consideration. Roughly speaking, Mr. Silburn is against small Colonial and self-owned Navies, and also against the existing system of monetary grants. The former, he considers, are likely to lead to secession while the latter, unless the amount granted (and that, in his opinion, is quite impossible) is surplus to the Colonial Defence Vote, means the weakening of the Empire's defences. Mr. Silburn believes that the withdrawal of such grants will be more than compensated for by the strengthening of Colonial Militias and by adequate defences for Colonial harbours. He is in favour of a proportion of the Colonial Militias being available for service in other parts of the Empire, and estimates that more than 115,000 men for this purpose could be raised in the different large self-governing Colonies.

Finally, the author urges the desirability of establishing an Imperial Council of Defence consisting of:—

- 3 members to represent the Navy;
- 2 members to represent the Home-serving Army;
- 2 members to represent the Indian Army;
- 1 member to represent Australia;
- 1 member to represent Canada;
- 1 member to represent South Africa; and
- 1 member to represent New Zealand.

To follow the arguments in favour of the various conclusions arrived at is impossible in the limited space available, but it may be noted that Mr. Silburn apparently has a special predilection for coast defences, which he occasionally describes as "commanding" certain seas, which he believes would go far towards rendering secure the Imperial trade routes. Many of these defended ports might, he thinks, be cheaply garrisoned by training the natives of Africa as garrison gunners.

An Imperial Military System. By Capt. D. I. Macaulay. 19 pp. 8vo. London, 1909. Clowes. -/6.

This short article puts forward suggestions as to how, in the author's opinion, the Colonies can most effectually assist Great Britain in the organisation of a system

of Imperial defence. Our Imperial military system, he considers, must depend on two main considerations—the geographical structure of the Empire and our Imperial policy, the latter of which conforms to the former. With regard to geographical considerations alone, the ideal Imperial military system would take the form of an Imperial Navy, separate national defence forces for purely defensive purposes, and expeditionary forces which are necessary to complete the offensive action of the Navy. Though connected at all times by the Imperial General Staff, the expeditionary forces should be National in times of peace and Imperial in war, when united by the Navy. Owing to the expense, he considers that none of the self-governing provinces could maintain a local Navy that would be of any practical assistance, but that they could maintain expeditionary forces which, owing to their strategic positions, would solve the difficulty of reinforcing British garrisons in any of the dependencies touching the Indian Ocean or the Pacific.

The National Defence system of Great Britain could then be directed to training forces for the peace garrisons of the dependencies, to creating such local defence forces as would give complete freedom of action to the Navy, and to maintaining a two-Power standard fleet in European and Atlantic waters.

As regards India, the author is of opinion that the time must come when an Indian Ocean Fleet will be as much a *sine qua non* for the defence of India as is an Indian Army, and that consequently the maintenance of such a fleet might be regarded as India's normal contribution to the offensive power of the Empire, without reducing the strength of the land forces which she at present maintains.

The author claims that the system he has outlined has advantages as compared with any scheme in which the Colonies take part in naval defence by contributions or by local Navies.

Universal Service. By Col. Sir C. M. Watson. 31 pp. 8vo. London, 1909. Rees. -1/6.

This little pamphlet is a *résumé* of some of the arguments for and against the system of voluntary service, conscription, and universal service, with special reference to our requirements. The principal advantages and disadvantages of each system are first briefly discussed and summarised. Universal service as applied in Germany and Switzerland is then shortly described and its application to Great Britain considered.

The author considers that the advantages accruing from universal service, both to the Army and to the nation, far outweigh the few minor inconveniences that might be experienced by individuals, and puts his case forward in a very succinct manner.

Invasion and Conscription. By J. A. Farrar. 127 pp. 8vo. London, 1909. Unwin. 1/-.

The writer puts forward what purports to be the civilian idea of conscription; but his views as regards the conflicting ideas held by soldiers appear to be somewhat out of date. His arguments force one to the conclusion that he is one of the school which favours the Navy and Army being tied to our shores regardless of what happens to our Colonies and our prestige on the Continent. For the defence of the former he advocates the hiring of Chinese or other mercenaries. History will not bear out his faith in treaties, nor do the lowest class of criminals appear to be the most suitable recruits for the Army, the requirements of which are gradually reaching a higher intellectual and moral standard. His arguments, although far from convincing, are clearly put and worth reading.

Guide for Officers and N.C.O.'s of the Territorial Force. By Capt. J. Atkinson. 112 pp. 8vo. London, 1909. Gale and Polden. 2/-.

This small handbook is intended as a book of reference for officers and men of the Territorial Force. It contains extracts from Territorial Force Regulations, King's Regulations, and various other official text-books, and embraces a wide field from appointment and enlistment to mobilisation and funerals. Each phase is treated separately and very briefly.

The tactical portion of the book is confined to two sections, entitled "On the March" and "Protection" consisting of four and twelve pages respectively. Owing to this condensation we find several definite statements inserted which require certain qualifications as regards prevailing conditions. These give the false impression that "sealed pattern" formations may still be regarded as the general rule.

POLITICAL.

Austria-Hungary. By Geoffrey Drage. 846 pp., with numerous maps and statistical tables. 8vo. London, 1909. Murray. 21/-.

This book is the result of data collected by the author during a period extending over many years. It is not produced merely as a result of the present position of affairs in the Near East, but to meet a permanent demand for a clear authority on the numberless economic and political problems peculiar to Austria-Hungary.

The political, commercial, financial and industrial aspects in Austria are first dealt with, followed by a similar presentation of these subjects in respect to Hungary. Affairs "common" to both portions of the Monarchy are then discussed, followed by chapters on the racial question, the annexed provinces, and finally the Balkan position.

There are probably not many individuals in this country, military or otherwise, who have any very clear knowledge as to the meaning or possible consequences of the statements which appear daily in the newspapers on the varied questions of the racial problem in Austria-Hungary, the Parliamentary crisis in Hungary, the independence party, the Pan-Slavist agitation, the agrarian and bank movements, and so on.

The present book will give the reader an easily understandable representation of all these exceedingly complicated points.

From the Treaty of Frankfort to the Algéiras Conference. (De la paix de Francfort à la conférence d'Algéiras.) By André Mévil. 328 pp. 8vo. Paris, 1909. Plon-Nourrit. 3/-.

M. Mévil's work is almost exclusively a denunciation of the foreign policy pursued by Germany since the war of 1870, a policy which, in the writer's opinion, has always had for its one aim and object the isolation and subsequent annihilation of France. M. Mévil seeks to show how Bismarck, as the originator of the anti-French policy, directed all his efforts towards ensuring that France should find herself standing alone and unaided by any other Power did she enter on a fresh conflict with Germany and also how the Chancellor's successors have followed in his footsteps. The means used to further this policy meet with the writer's severest condemnation.

The Franco-Russian alliance was a set-back to Germany, and she has tried ever since to find means to weaken Russia's power: it was, indeed, mainly German influence which induced Russia to adopt an attitude which left Japan no alternative but a declaration of war.

The alliance of France with Russia is not, however, regarded in Germany as militating against the isolation of France to nearly the same extent as does the Anglo-French *entente*. England is, in reality, the only nation seriously feared in Berlin, because against her alone of all the nations Germany is powerless to take aggressive action, and she alone can pit against Germany a real offensive force—namely, a predominating navy. The cementing of this *entente* more than compensates for the severe political defeat sustained by France at the hands of Germany at the Algéiras Conference—a defeat which should never have been experienced, seeing that Germany had no intention of and no object in declaring war at that time.

With England at her back France can afford to ignore German bluff and attempts at intimidation. A triple *entente* between England, France, and Russia forms a safeguard against German aggression, and were Italy to throw in her lot definitely with these three, the peace of Europe would be ensured.

Such are the opinions of M. Mévil, whose book serves at least to throw many side lights on the political history of Europe during the past thirty-eight years.

STRATEGICAL AND TACTICAL.

Java's Means of Defence against a Foreign Enemy. (Java's Weervermogen tegen een buitenlandschen vijand.) By Liout.-Col. F. Hering. Republished from De Indische Gids. 17 pp. 8vo. Amsterdam, 1909.

The object of this pamphlet is to plead for the organisation of the defence of Java on a national basis. The author considers that with the troops which would be available in case of an invasion the offensive-defensive would be the best tactics to adopt. The enemy's disembarkation should be delayed and his communications interrupted. Small detachments of native troops should be employed to hang on the enemy's flanks and rear. As regards the question of native officers, the author sees no reason why the same standard of education should be demanded from native candidates as is expected in the case of European officers.

The Manchuria-Korea Theatre of Operations, and our Probable Antagonists there, Japanese, Chinese and Korean. (Маньчжурско-Корейский Театр, и наши вероятные в немъ противники, японцы, китайцы, и корейцы.) By L. Radus-Zenovich. 124 pp. 16mo. Vilna, 1909. "Russki Pochin." 1/4.

This work is a study of Manchuria and the adjacent territories from a strategic point of view. The great geographical features, the resources of the country, and the lines of communication existing and projected are all examined in detail. The author sketches the movement of Russia to the East, the rise of Japan, and her commercial and economic interests. He also points to the military development of China, and considers that she may have to be reckoned upon as an important military factor before long. He is of opinion that Japan, in spite of her success in the war with Russia, 1904-5, is by no means satisfied with the result, which she considers to have been indecisive; and he proceeds to show how she is strenuously preparing to renew the struggle at an early date.

"The Japanese consider it desirable to settle final accounts with Russia as soon as possible so as to weaken her irremediably in Asia."

The review of the theatre of operations shows that the most important localities in the event of hostilities will be the valleys of the Liao Ho and of the Upper Sungari in Manchuria, and the north-east portion of Korea about Cherien and the River Tumen. The anxiety of the Japanese to develop railway communication is remarked upon, and attention is particularly drawn to the railway from Keng Sheng (near Possiet Bay) completed to Cherien and to a line from Gensan to Keng

Sheng, as well as to the Antung-Mukden line, recently a source of serious dispute. After discussing the extraordinary growth of the military expenditures of Japan since the war of 1904-5, and examining the recently improved facilities for the mobilisation and transport of her troops, the author concludes that Japan, if abetted by China, could concentrate a very large army in Southern Manchuria and North-Eastern Korea by the end of the third week from the declaration of war. (Fifty trains per day are estimated for Mukden alone and fourteen trains into Cherien.)

In the same time it is reckoned that Russia can concentrate adequate forces in the Sungari-Nonni basin, always provided that the Trans-Siberian Railway remains intact, for if this line is damaged, the Japanese will forestall their opponents and occupy Harbin. The effect of the Amur Railway is not considered.

The map, though crude and of the "caterpillar" type, clearly illustrates the features alluded to in the text.

Some Remarks on the Battle of Rezonville, 16th August, 1870. (En marge de la bataille de Rezonville.) By General Cherfils. 44 pp., with 4 maps. 8vo. Paris, 1908. Berger-Levrault. 1/11.

This pamphlet contains some interesting notes on the Battle of Rezonville, especially in connection with the action of the cavalry. These are followed by an imaginary description of the lines on which the battle would be fought at the present time.

The most valuable part of the work is, however, the last chapter, in which the author deals with the moral aspect of the battle; he calls Rezonville the "bataille morale par excellence" of modern battles, and shows the great influence exercised by moral on the course of the fighting which alone saved Alvensleben from a crushing reverse. Though he criticises Alvensleben's action as rash, he admits that his conduct was that of a bold and determined leader, and says that he is really the man who, by his daring rashness, made the German Empire a reality.

The last three pages give a good description of the German conception of modern war, showing the enormous importance which should be attached to moral qualities, to patriotism, sense of duty and self-sabotage. General Cherfils agrees with the German view that an army "rotten with love of comfort and luxury, whose training and education are not imbued and thoroughly impregnated with the spirit of abnegation and self-sacrifice, is incapable of gaining victory and is ripe for defeat."

Impressions Formed on Field Service and Manœuvres. (Impressions de campagne et de manœuvres.) By Réginald Kann. 133 pp., with 5 sketch maps. 8vo. Paris, 1909. Lavauzelle. 2/6.

The author, who acted during the recent operations in Morocco as military correspondent of *Le Temps*, and whose knowledge of military affairs entitles him to speak with considerable authority, has written a volume of more than ordinary value. He served with the Boers during the late war in South Africa, and the frequent allusions to incidents in that campaign will cause his work to be read with special interest by British officers.

The book is divided into two parts, the first dealing with the fighting around Casablanca, the second with the German Imperial Manœuvres of 1908 and the French "Manœuvres du Centre" of the same year.

Part I. gives a clear narrative of the events which led to the trouble in Morocco in July 1907, and of the subsequent operations. These operations are divided into two campaigns, the first from the 7th August to the 31st December, 1907, the second from the commencement of 1908 to the 16th May, 1908; the latter is dealt with very exhaustively. The author emphasises the fact that a Colonial campaign, such as that of the French in Morocco, differs in every essential detail from one waged against a European Power, and that such experience as the troops engaged in it may acquire, so far from constituting a useful schooling, may prove to be actually detrimental as a preparation for Continental warfare. Part I. concludes with a short discussion regarding the armament of the French troops, the question of the employment of machine guns being dealt with at length.

Part II. comprises a description in "narrative" form of the German Imperial Manœuvres and of the French "Manœuvres du Centre," followed by criticisms of, and comparisons between, the two. M. Kann admits that it is hardly possible to draw, even from grand manœuvres, a just comparison between the relative merits and demerits of the armies of different nations, but it has been his endeavour to differentiate as regards salient points, between the systems and methods employed by each army, as evidenced in the manœuvres witnessed by him. The main points discussed are the following:—

- The higher commands.
- The tactical employment of infantry.
- The tactical employment of cavalry.
- Artillery and machine guns.
- Combined action.

Special reference is made to the extreme importance attached by all commanders to a reliable system of intercommunication, and the failure to provide such a system is strongly commented upon in the case of the French manœuvres.

The author supports his views by quotations from the writings of soldiers of high standing, and the references made to incidents in past campaigns enhance the interest of the volume.

Co-operation Between the Arms. (La Liaison des Armes.) By General Percin. 89 pp. Svo. Paris, 1909. Chapelot. 1/8.

The volume is devoted entirely to a discussion regarding the best means to be adopted to ensure the effective support of infantry by artillery fire. General Percin commences with a brief description of various experiments carried out by units of the XIIIth Army Corps, and the deductions he draws are based on these experiments and on the experiences gained during the manoeuvres of 1908.

In the author's opinion artillery fire can be best regulated so as to afford effective support to the infantry by a combination of what he terms "liaison par le haut," and "liaison par le bas." The common objective of both arms is to be determined by the former, the best means of securing that objective by the latter. In other words, the higher commander, having designated the main points on which the infantry attack is to be concentrated, the artillery commander should allot the supporting artillery for each zone; this done, it remains for the "liaison par le bas" to ensure that the artillery is placed in possession of information which is sufficiently accurate to admit of the guns using their fire to the best effect. Various suggestions are put forward to secure this object, and the conclusion reached is that an "agent de liaison" should accompany the officer directing the infantry attack in each zone, such "agent" being either an officer or non-commissioned officer of artillery whose sole duty it is to convey to the artillery the wishes of the commanding officer whom he accompanies, and such other information as may lead to more effective artillery fire.

The means of transmitting messages from the "agent" to the guns is discussed with much detail. The telephone is considered unreliable, and the suggestion finding most favour is that a series of transmitting posts should be established, each post consisting of two infantrymen. It is contended that a simple signalling code can be devised, which, whilst not necessitating the employment of skilled men, will suffice to convey rapidly all information which is actually essential for the close support of the guns.

The volume serves at least to throw additional light on a complex problem, even though the solution it offers may not be regarded as one which is wholly satisfactory.

Successive Modifications introduced in Infantry Tactics. (Modifications successives apportées dans la Tactique de l'Infanterie.) By Lieutenant-Colonel Dencausse. 60 pp. Svo. Paris, 1908. Chapelot. 1/-.

Colonel Dencausse, in dealing with the gradual evolution of infantry tactics, treats his subject under the three following headings:—

- (1) A study of tactics from ancient times up to the Restoration.
- (2) The tactics employed during the period embraced between the Crimean War and the Russo-Turkish War of 1877-78.
- (3) Modifications in tactics introduced as the result of the experiences of late years, with special reference to the Russo-Japanese War.

He aims at assigning a cause for each successive change in the method of handling troops in the field, and quotes many specific instances in support of his theory that actual and usually disastrous experiences on the field of battle have been responsible for the introduction of every important tactical modification. The comparison drawn in Chapter IV. between the French Training Manuals of 1884, 1894, and 1904 is of considerable interest.

Tactics of To-day. By Colonel C. E. Callwell, C.B. 162 pp. Svo. London, 1909. Blackwood. 2/6.

This is the second edition of this book, which was originally published in 1900. Some important alterations have been introduced as a result of experiences during the later stages of the South African War and of lessons learnt from the Russo-Japanese War.

The object of the volume is to point out how existing conditions necessitate sweeping modifications in the rules and principles of conducting combats which have been accepted up till recently. Branches of tactics which are not greatly affected by the introduction of modern weapons are but cursorily touched on, and a complete picture of tactics is not attempted.

The author deals in successive chapters with the principles of attack and defence, the tactics of infantry, mounted troops and artillery and defence works. His conclusion with regard to attack and defence is that the latter has gained to a much greater extent than the former, due to the improvement in modern arms, owing to the larger proportion of the defending side which can be kept in reserve for offensive purposes, without unduly weakening the force allotted to the passive defence of a position.

Impressions of a Russian Staff Officer at the French Grand Manœuvres in 1908. (Impressions d'un Officier de l'état-major russe aux Manœuvres du Centre en 1908.) By V. v. D.

This paper appeared in the form of two articles in the *Journal des Sciences Militaires* for 1st and 15th June, 1909.

The author attended the German Imperial Manœuvres before visiting the French Manœuvres, with the result that he has been able to make useful and valuable comparisons between the two armies. His criticisms of the personnel of the French troops, their leaders, tactics, moral, &c., are exceedingly interesting and instructive, and a neutral of the two armies is recommended for all those who take an interest in the French and German Armies.

Combined Manœuvres in Italy, 1908. (Les Manœuvres Combinées en Italie.) By Commandant Deffresse. 20 pp., with 2 maps. 8vo. Paris, 1909. Berger-Levrault. 1/3.

The leading idea of these manœuvres was that a superior naval Power, based on Southern Italy, should endeavour to land a force of one and a half divisions on the Ligurian coast in spite of the opposition of a weak naval Power based on the Ligurian ports, who would be supported by one division of mobile Militia.

The naval operations and the land operations subsequent to disembarkation are given in some detail. There are no details as to the actual disembarkation or the establishment of a provisional naval base.

Invasion and Defence. By "Fabius." 200 pp. 8vo. London, 1909. Treherne. 2/-.

In the preface it is stated that the object of this book is to draw attention—

- (1) To the probability of German invasion in the immediate future in much greater force than is generally supposed.
- (2) To the false position in which our fleet is placed by being tied to our shores.
- (3) To the fatal mistake it would be to employ our Territorial troops, while still imperfectly trained, to oppose disciplined armies in the open field.
- (4) To the necessity for constructing fortified and entrenched positions as a means of gaining time for the organisation of our reserves, the reception of reinforcements, and the training of untrained troops, and for the purpose of protecting vital points of the kingdom which are at present defenceless on the landward side.
- (5) To the very great possibilities which might result from adopting at the outset this policy of defence.

The author gives an outline of the naval and military situation and of the present plan of defence, and then enlarges on his proposed alternative scheme which he has worked out in some detail. He assumes that the position of Great Britain in the case of a really serious invasion would be exactly the same as that of the allied forces in Portugal during the Peninsular War, and bases his conclusions on the success which attended the defence of the lines of Torres Vedras. The imaginary siege of London is described, and about three months after the outbreak of hostilities, during what is called the third stage of the siege, the offensive is adopted and the invaders are defeated.

TRAINING AND EDUCATION.

An Introduction to Military Geography. By Brigadier-General E. S. May, C.B., C.M.G. 274 pp., with maps and sketches. 8vo. London, 1909. Rees. 8/6.

This book will prove of great interest to students of strategy. The necessity of studying the question of frontiers and physical obstacles is apparent to all, but a concise account of their value, illustrated by campaigns, has been long required.

The descriptions of the French and German frontiers and strategical railways and canals proposed and in course of construction are interesting. The chapters describing the geographical conditions of the war in Manchuria, the opening up of Siberia, Canada and Arabia, and examining the North-West Frontier of India from a strategical point of view, are perhaps the most valuable parts of the volume.

The author's intention is to arouse interest in the close relation which exists between war and the geographical conditions of its theatre, and this object the book fulfils.

Strategy of the Franco-German War. By Brevet-Major W. D. Bird. 126 pp., with maps, sketches, and tables. 8vo. London, 1909. Rees. 6/-.

The lectures on this subject, which the author delivered at the Indian Staff College, are here presented in book form. After shortly describing events leading up to the outbreak of hostilities, he deals fully with the operations up to and including the Battle of Sedan, from a strategical point of view.

The facts have been taken from the official accounts of the war, and have been so arranged that the campaign can be studied from either the French or German side. A number of sketches show clearly the "supposed" and "real" positions of the opposing armies at various dates between 20th July and 1st August, and these, together with discussions on alternative plans of operations at critical junctures, greatly facilitate a close study of the campaign.

The volume concludes with twelve "Problems suggested by the Operations" and the Appendices include tables showing the "Organisation of the French and German Armies in 1870" and the daily dispositions of the forces engaged.

Strategy of the Russo-Japanese War. By Brevet-Major W. D. Bird. 100 pp. 8vo. London, 1909. Rees. 4/6.

These lectures give a brief but clear general outline of the principal strategical lessons to be learnt from this campaign, and will prove of assistance in the study of more detailed accounts of the operations.

After a short description of the geographical and political factors, and of the events leading up to the war, the author divides his narrative of the operations into two phases, separated by the Battle of Liao-Yang, and concludes with a chapter on the lessons of the war.

Sketches throughout the text show the position of the contending forces clearly at various periods of the campaign, and the Appendices include details of the organisation of troops and their approximate distribution and strength at specified dates and localities.

An Introduction to the History of Tactics, 1740-1905. By Captain A. F. Becke. 104 pp. 8vo. London, 1909. Rees. 3/6.

This short study of the history of tactics is published with the object of assisting candidates for examination. It is not intended to be an exhaustive treatise on the development of tactics, but merely to furnish the foundations for a more extensive study of the subject.

The author deals generally with the evolution of tactics from the time of Frederick the Great up to the present day, and divides these two and a half centuries into six periods.

The principal changes in each period are first generally described, and their effect is then briefly considered by individual arms, suitable battles being cited in illustration of the developments of the period.

In the Appendices, which comprise the last thirty pages of the book, Captain Becke discusses more fully the employment of column and line between 1723 and 1815, and maintains that the column formation as adopted by the French at this time, was only a formation of readiness and manoeuvre, and not one for the decisive attack. He then deals in greater detail with the more important points in the tactics of the Russo-Japanese War, and in conclusion gives a series of questions, many of which are taken from papers that have been set at Militia competitive examinations, but all of which do not appear to be fully answered in this volume.

Tactical Discussions on the Ground. (Taktische Besprechungen im Gelände.) By Major Julius Hoppenstedt. 62 pp., with map. 8vo. Berlin, 1909. Mittler. 1/8.

The author, who belongs to the 40th Fusilier Regiment, quartered at Anchen, has selected a piece of ground on the Dutch frontier, immediately east of Maastricht, on which to work out his tactical problems which he offers for study to officers of all arms.

The problems deal with an advanced guard action, an encounter combat, and a battle fought on a definite plan, each phase resulting from the one preceding it.

The opposing forces consist of the VIIth and VIIIth Army Corps and it is interesting to note that the author apportions a machine gun company to one infantry regiment in each brigade.

The problems are interesting and instructive.

The Practical Training and Education of a Company. (Die praktische Ausbildung und Schulung der Kompagnie.) By Captain Rucker, German Army. 142 pp. 8vo. Berlin, 1909. Mittler. 3/-.

This is the first part of a work of which the second part (dealing with musketry and field training) is in course of preparation.

In an introduction the author advocates that drill and instruction in field duties should proceed concurrently, since an undue preponderance of drill in the early stages gives false impressions to men. Conversely a man who realises the demands of a modern battle will appreciate the importance of strict drill.

The book contains two sections devoted respectively to drill and the combat. In dealing with the former the author warns against undue repetition with a view to correcting mistakes, and against undue prolixity in giving explanations. The less marching past is practised the better will it be carried out.

In the section on field duties the author, amongst other things, lays down the following:—

Tactical discussions are a good means of instructing N.C.O.'s. Instructions at field exercises should give every possible latitude to subordinate commanders whilst clearly indicating the object in view. Full information should be given concerning neighbouring units whether real or imaginary. Great attention should be devoted to the wording of all orders.

All ranks must be trained to fill positions higher than those normally assigned to them. Men should constantly be trained to watch distant objects with a view to improving their sight. When practising firing exercises, living targets are preferable to points in a landscape. In order to simulate the noise of the battlefield, drums should be beaten and bugles blown immediately in rear of the unit. As an aid to judging distance, the exact distances between various points on a drill ground should be known to the men. Volleyers should not altogether be neglected. To inculcate economy in ammunition, all rounds with a company should be

distributed amongst a small proportion of it, the rest noting the time taken to expend it. In extended order sections of a company should be directed independently by commanders instead of marching by a section on a flank—valuable training is thus afforded to leaders of smaller units. Thorough reconnaissance is a necessary preliminary to all good leading. Every commander should, when approaching unknown ground, move well in front of his command. This "hasty reconnaissance" is characterised as most important. A few men should constantly be sent out to reconnoitre during a fight.

"Sohomes" for field days need not end in "fights." In peace exercises account must be taken of the reconnoitring activity of an enemy who is not represented by troops.

At field exercises things should be allowed to take their course. Instructions can be gathered from any kind of situation. The handling of units at war strength is essential for all leaders.

Reinforcements should, if possible, adjust sights before joining a firing line, but men firing should be trained to call out the range to newly arrived men or parties. Each man must know his fire-unit commander, but men's attention should not be distracted by too much "re-forming."

Commanders joining a firing line should not assume command until a situation has been thoroughly grasped. Engagements must not terminate with the capture of a position. Rallying and pursuit should be practised. In pursuing through a wood, much noise should be made with a view to alarming a retreating enemy.

The work is full of valuable hints for infantry officers.

Notes on Visual Training and Judging Distance. By Quartermaster-Sergeant-Instructor Bostock. 56 pp., with numerous illustrations. 12mo. London, 1909. Gale and Polden. -/6.

A useful little book for instructors and others. It contains hints as to how the eyesight and powers of observation may be improved, and insists on the necessity for training in judging distance being regarded as of equal importance as accuracy in shooting.

The Old Story. (Vieille Routine.) By General Devauraix. 90 pp. 8vo. Paris, 1909. Charles-Lavauzelle. 1/3.

The author begins by insisting on the extraordinary devotion with which all ranks of the army, and especially regimental officers, threw themselves into the work of renovating the army after the terrible losses of 1870. He then speaks of the cramping effect of "routine," and is of opinion that even the disasters of 1870 were not sufficient to open the eyes of the French to the cramping effect of a dull round of uninteresting duties.

He speaks of the faulty syllabus of St. Cyr, and of the lack of concentration on such studies as are calculated to make useful officers, and thinks that the most recent successes gained by the French Army, those of 1899 were won in spite of indifferent military education and training, and may be attributed chiefly to the mistakes of their opponents. In the opinion of the author, much of the military instruction of the day is lacking in variety and interest, while many parade drills and exercises to music are more calculated to produce the precise execution of concerted movements on the stage of the "Moulin Rouge" than on the battlefield.

In conclusion, he insists on the fact that nothing can be improvised in war, and that an army is of value proportionate to the extent to which its previous education and training have been on the right lines. In short, that an army reaps in war only what has been sown in time of peace.

The Inculcation of Patriotism among the Rank and File. (L'éducation patriotique du soldat.) By Lieutenant M. Roland. 260 pp. 8vo. Paris, 1908. Perrin. 3/-.

The main idea of this book is that the conscripts come to barracks with an insufficient moral education for the proper execution of their duty and that during their two years of service the regimental authorities should supply this want. The author considers that a knowledge of the history of one's own country is necessary to the development of patriotism, and that the present complete ignorance of this subject, of which he furnishes examples, is due to bad teaching in primary schools.

He then speaks of the various agencies for the inculcation of patriotism among the rising generation, such as instruction in the family, school songs, military museums, and the study of history and geography.

Handbook of the Fulde Language. (Handbuch der Ful-Sprache.) By D. Westermann. 274 pp. 8vo. Berlin, 1909. Reimer. 8/-.

This work would be of the greatest assistance to anyone conversant with German and desirous of studying the Fulde language. It contains a German-Fulde dictionary, grammar and exercise book.

The author asserts that the Fulde language is more extensively spoken than perhaps any other in Northern Africa. The Fulde nation is to be found populating the country immediately south of the Sahara Desert from Senegambia to the Egyptian Soudan, sparsely in some parts and densely in others.

What to Apply in Tactical Problems. By Capt. A. F. Becke. 173 pp. 8vo. London, 1909. Paul, Trench, Trübner. 3/6.

The object of this book is to help officers studying for promotion examinations and those who are called on to set and criticise simple tactical schemes, and for these purposes it should prove of assistance.

The author lays stress on the application of the general principles contained in the official regulations and deprecates a rigid adherence to the wording of those publications, even for examination purposes.

The instructions under each sub-head are concise, well arranged, and appear up to date.

Catechism on Field Training. By Lieutenant-Colonel W. Plomer. 196 pp., with 28 plates and index. 8vo. London, 1909. Gale and Polden. 3/.

The fourth edition of this book is on the same lines as previous editions. The revision was apparently concluded before the publication of "Field Service Regulations," Part I. as the references are to Combined Training.

The Entrance Examination Papers for the Staff College for 1909. (Die Aufgaben der Aufnahmeprüfung 1909 für die Kriegsakademie). By Major Kraft. 62 pp., with 9 figures in the text. 8vo. Berlin, 1909. Mittler. 1/6.

The papers are set on the following subjects: military history, minor tactics, applied tactics, arms and ammunition, fortification, reconnaissance, sketching, history, strategical geography, languages and mathematics. Solutions to all questions are given.

(To be continued.)

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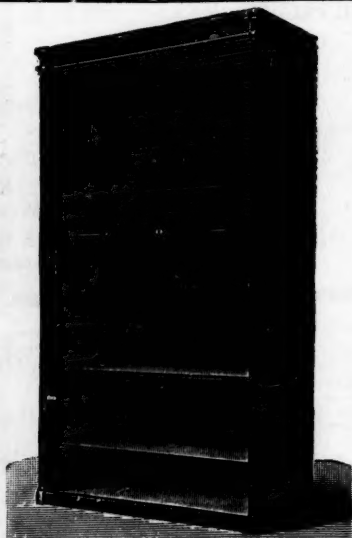
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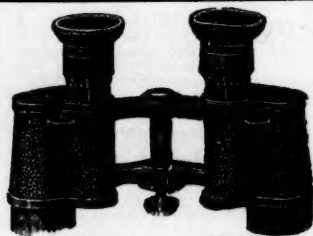
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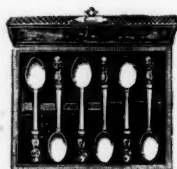
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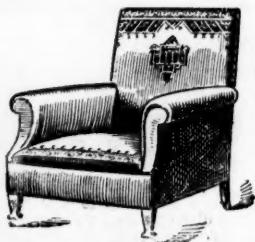
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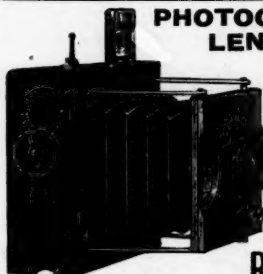


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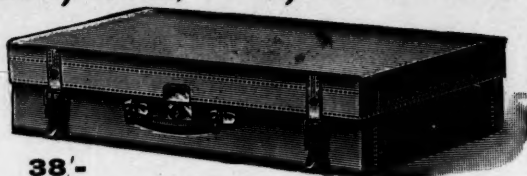
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" H. M. Durand, 9th Lancers.
Capt. A. C. Girdwood, D.S.O., Northumberland Fusiliers.
" C. D. H. Moore, Royal Warwickshire Regiment.
Brevet-Major L. H. R. Pope-Hennessy, D.S.O., Oxfordshire Light Infantry.
Capt. G. H. Martin, King's Royal Rifle Corps.
" C. Ogston, Gordon Highlanders.
" L. F. Arthur, Indian Army.

Other Successes include:

ARMY QUALIFYING (MARCH).

NINE PASSED.

WOOLWICH (JUNE).

TWO PASSED.

INDIAN POLICE (JUNE).

ONE PASSED.

MILITARY COMPETITIVE (MARCH).

SEVEN PASSED.

PROMOTION (MAY).

FORTY-THREE PASSED.

WORK NOW GOING ON IN ALL DEPARTMENTS.

For Prospectus, apply the Secretary.

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